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TARKA-SAṄGRAHA

OF

ANNAMBHAṬṬA

WITH THE AUTHOR'S DÎPIKÂ, and

GOVARDHANA'S NYÂYA-BODHINÎ

EDITED BY THE LATE

YASHAWANT VASUDEV ATHALYE, M. A., LL. B.

TOGETHER WITH

INTRODUCTION AND CRITICAL AND EXPLANATORY NOTES

BY

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Vakil, High Court, Bombay.

REVISED AND ENLARGED

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Preface to the Second Edition

The first edition of this book was published in 1897 and was soon out of print. Annambhaṭṭa's work having been appointed a text-book for examinations by Bombay and other Universities, there was a great demand for a second edition, but various reasons interrupted the work of revision. It was at first intended to omit the *Nyâya-Bodhinî* which had nothing special about it, and insert in its place *Tarka-Dîpikâ-Prakâśa* of *Nîlakaṇṭha* and also a few useful extracts from other commentaries by way of footnotes; but as the plan would have increased the bulk of the volume it was abandoned and the text of the first edition was retained. Three additional copies, marked Q. U. and W, were available for consultation and the necessary corrections and additions suggested by them have been made in the text, more particularly in the *Nyâya-Bodhinî.* U and W especially afforded considerable help in settling many doubtful passages of this commentary, and many of their variants have been adopted in this edition. The new commentaries published in W were also useful in clearing ambiguities in the text of the *Sangraha* and the *Dîpikâ,* and the text may now therefore be said to be finally settled for all practical purposes.

The most important addition to the Notes was a literal translation of the text of the *Sangraha* printed in italics at the top of each section, which will be found useful to students. Ambiguities and mistakes left in the hurry of the first edition have now been removed as far as possible, and many passages in the notes have been re-written for the purpose. Some paragraphs had to be renumbered and some sections have been rearranged. Portion of the preface in the first edition dealing with the author has been placed after the Introduction, and another portion dealing with Mss. collated for the text has been transferred to the end as Appendix C. The Index at the end is a new feature added in this edition.

The Introduction required very few alterations. Where new facts have been brought out by later reseraches, addi-

tional foot-notes have been inserted at the proper places. The discovery of unknown Jain and Buddhistic literature in India as well as in Tibet and China by the researches of distinguished scholars like Dr. Sarat Chandra Das and Mahâmahopâdhyâya Satisa Chandra Vidyabhushana is likely to throw new light on many dark spots in the history of Indian philosophy, and many of our current notions are also likely to be altered. All speculations on this subject must therefore be accepted as only provisional at present. It would be a very interesting and instructive study to trace the gradual development of many philosophical problems, such as the atomic theory, the identity of cause and effect, the Nyâya syllogism and the notion of *Abhâva*. But until fuller materials are available, it will be worse than useless to indulge in idle guesses. It is now fully recognized that Indian philosophical systems are not the creations of individual promulgators, but organic growths from out of various currents of thoughts germinating through ages and collected in the Brâhmaṇas the Âraṇyakas and the more ancient Smṛitis and Purâṇas. A critical and comparative study of these philosophies will assuredly reveal the lines of this growth as well as its reaction on the religious development of the Hindus. It is to be hoped that Indian scholars will devote greater attention to the study of this aspect of Indian philosophy.

Bombay,
30th September
1918.

M. R. Bodas

Extract from the Preface to the First Edition

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A few words as regards the explanatory and critical notes appended to this edition will suffice. The chief aim in writing these annotations was to make them as exhaustive as the limited scope of a book mainly intended for students would permit. The notes will not appear disproportionate to the text, if the difficulty of the subject as well as the want of a proper guide to these systems are taken into account. The notes are designed to give the student a tolerably complete and accurate idea of the *Nyâya* and *Vaiśeshika* systems as a whole; and hence many topics, although omitted or only cursorily glanced at in *Annambhaṭṭa's* work, have been discussed in the notes, because they form essential ingredients of the systems. Manuals like the *Tarka-Saṅgraha* and the *Dîpikâ* are to be studied only as stepping stones to the knowledge of a great and intricate science; and the notes have been written with a view to facilitate the further progress of the student as much as possible.

An attempt has been made in the *Introduction* prefixed to this edition to trace the gradual development of *Nyâya* and *Vaiśeshika* literature from the age of the *Sûtras* upto the latest period. A historical sketch like this is sure to give the students a better notion of these systems than any amount of study of isolated works. The attempt is of course only tentative, but it at least opens a vast field for inquiry which may be profitably pursued in future. It was at first intended to discuss some of the more important doctrines of *Nyâya* and *Vaiśeshika* systems in the *Introduction*, especially with reference to their evolution and bearing on the general course of thought in India. The task, however, was found to be too vast for such a work as the present and the plan had to be abandoned for want of space; but a few hints of the kind will be found in the notes in their proper places.

It will not be proper to conclude this preface without briefly explaining the circumstances under which this work is published. The present edition of *Tarka-Sangraha* with commentaries and notes was undertaken by the late Mr. Y. V. Athalye more than twelve years ago and it was an ambition of his life to devote all his leisure time to the writing of the notes so as to make them really exhaustive and useful, not only to students in Indian Colleges, but also to advanced scholars. He saw that in order to popularise the study of *Nyâya* it was necessary to clear the many disputed points that beset the path of a conscientious student and to place the cardinal doctrines of the *Nyâya-Vaiśeshika* philosophy in their true light. No man was better fitted for such a work than Mr. Athalye, whose profound scholarship and legal acumen enabled him at once to unravel the intricacies of *Nyâya* logic. Pressure of official and other business however hardly left him any time to complete a task upon which he had set his heart. The work had to be constantly put aside, and consequently much labour and time were wasted in these interruptions; while latterly ill health made him more and more unable to bear the strain of a continuous effort. In spite of these difficulties he hoped to bring out this edition at an early date, and would have done so had not premature and almost sudden death carried him off at a time when he was most wanted. He had however left ample materials behind him, which required only a final revision and arrangement to make the book acceptable to the public; and so it was resolved to publish it as a posthumous work...............

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Introduction.

A Historical Survey of Indian Logic.

" THE foundation of logic as a Science," says Ueberweg, " is a work of the Greek mind, which, equally removed from the hardness of the Northern and the softness of the Oriental, harmoniously united power and impressibility.[2]" The supple mind of the Oriental is said to be wanting in the mental grip and measure required for strictly scientific thinking. Ueberweg, when he laid down the above proposition, was not wholly ignorant of the existence of *Nyâya* philosophy, but his knowledge of it seems to have been very meagre. Had he known some of the standard works of *Nyâya* and *Vaiśeshika* systems, he would not have passed such a sweeping remark about the incapacity of the Oriental mind to develop a rigorous science like Logic. The same ignorance has led many eminent writers to belittle Indian philosophies in general or, where striking coincidences are discovered between Greek and Indian speculations, to assume a Grecian importation of philosophical ideas into India at some ancient time. Thus Niebuhr unhesitatingly asserts that the close similarity between Indian and Greek philosophies cannot be explained " except by the intercourse which the Indians had with the Græco-Macedonic kings of Bactria.[3]" On the other hand, there are writers like Gorres who as positively declare that the Greeks borrowed their first elements of philosophy from the Hindus. Max Muller is probably nearer the truth in saying that both Greek and Indian philosophies were autochthonic, and that neither of the two nations borrowed their thoughts from the other.[4] As the human mind is alike everywhere, it is quite possible that philosophers in both India and Greece unconsciously adopted the same mode

of reasoning and arrived at similar results quite independently. A closer study of Indian philosophical literature is already producing a conviction among European scholars that it is tolerably indigenous and self-consistent, and that it does not need the supposition of a foreign influence to explain any portion of it. It should also be noticed that notwithstanding many coincidences between the Indian and the Grecian currents of philosophical thought there are several features in each so peculiar as to make any inter-communion between them highly improbable. The fact, for instance, that Indian Logic retained a close similarity to Pre-Aristotelian Dialectics up to a very late time is a legitimate ground for believing that the influence of Aristotle's works was never felt in India. Besides, as a history of Indian philosophy is still unwritten, and will probably remain so for years to come, it is advisable for every student to keep an open mind on the subject. Preconceived theories, however ingenious or plausible, are more likely to mislead than help such investigations. We shall therefore assume, until the contrary is indubitably proved, that Indian philosophy, including Indian logic, is a home-grown product, created by the natural genius of the people and capable of historical treatment.

That it is possible to write a history of the *Nyâya* and *Vaiśeshika* philosophies will be readily admitted; but a history of philosophy, such as it ought to be, presupposes a good many things, which may not find universal acceptance. It assumes, for instance, that the Indian systems of philosophy were gradually evolved out of a few broad principles by a succession of writers and under particular circumstances. The idea that philosophical speculations in India were the spontaneous brain-creations of a few mystic Brahmans, dreaming high thoughts in lonely forests and totally unaffected by the passing events of the world, must be discarded once for all. There is no reason why philosophy in India should have followed a different course from what it did in Greece and other civilized countries. Systems of philosophy are as much liable to be influenced by past and contemporary events as any other branch of science or literature; and Indian

philosophy should be no exception to the rule. But the task of writing such a history is beset with innumerable difficulties. The chief of these is the absence of any reliable historical data which might serve us as landmarks in the ocean of Sanskrit literature. Not only are the dates of the principal writers and their works unknown, but even the existence of some of them as historical personages is doubted. Many of these works, again, are not available for reference,[1] while of those that are printed or can be procured in Ms. only a few have yet been critically studied. European scholars are still too much engrossed in their Vedic and antiquarian researches to devote serious attention to a systematic study of Indian philosophies; while as to native Pandits, however learned, the very notion of a history of philosophy is foreign to their minds. There are works in Sanskrit, like the *Sarva-Darśana-Sangraha* of *Mâdhavâchârya* and the *Shad-Darśana-Samuchchaya* of *Haribhadra Sūri*, which profess to treat of all current systems of philosophy ; but the historical view is totally absent in them. There the systems are arranged either according to their religious character or according to the predilections of the author. In modern times, scholars like Colebrooke, Weber, Hall and Bannerjee have made some valuable contributions, but many of their opinions and criticisms are now antiquated and stand in need of revision in the light of further researches. A good deal has also been added to our knowledge of the Buddhistic literature, but even there the attention of scholars has not yet been sufficiently directed to its philosophical portion. It is not possible, therefore, under these circumstances to do more than throw out a few hints which, while dispelling some of the prevalent errors on the subject, will serve as a basis for future inquiries in the same direction. The following pages will not have been written in vain if this aim is even partially achieved.

The value of a history of philosophy will be appreciated by those who know how much our knowledge of Greek

[1] Most of the writings of eminent Buddhist logicians like *Dinnâga* and *Dharmakîrti* are now available only in Chinese and Tibetan translations, their Sanskrit originals having been apparently lost. See Sadajiro Sugiura's *Hindu Logic as preserved in China and Japan*

philosophy has been deepened by the accounts left by Plato, Xenophon and Thucydides. Systems of philosophy as well as individual doctrines are never the products of personal caprice or of mere accident; they are evolved out of a long chain of antecedent causes. They are in fact the tangible manifestations of various latent forces which mould the character and history of the nation. There could have been no Aristotle without a Plato or a Socrates, and no Socrates without the Sophists. A knowledge of this sequence is therefore essential to a true appreciation of every system and every doctrine, an isolated study of them being either insufficient or misleading. Besides, theories and schools are often the work not of one individual or of one age, but of a succession of thinkers who fashion and refashion them as it were until they become worthy of general acceptance. Such seems to have been the case with doctrines of God, of causality and of creation, in India as well as in Greece. The true aim of a history of philosophy may be explained in the words of Zeller:—

"The systems of philosophy, however peculiar and self-dependent they may be, thus appear as the members of a larger historical inter-connection; in respect to this alone can they be perfectly understood; the further we follow it the more the individuals become united to a whole of historical development, and the problem arises not merely of explaining this whole by means of the particulars conditioning it, but likewise of explaining these moments by one another and consequently the individual by the whole."[1]

A history of Indian philosophy, such as would fulfil this purpose, is not of course possible in the present rudimentary state of Indian chronology. Still even a crude attempt of that kind will give truer insight into each system or each doctrine than can be got by a study of isolated works. The need of such a connected view of philosophy is all the greater in the case of systems like the *Nyāya* and the *Vaiśeshika* whose real merits

lie hidden under a heavy load of scholastic surplusage. They have not the halo of religion and mysticism which makes the *Vedânta* and the other theological systems so attractive to students of Hindu philosophy, while the scholastic subtleties of the most modern *Nyâya* writers, such as *Siromani* and *Gadâdhara*, inspire positive terror in untrained minds. If the *Nyâya* and *Vaiśeshika* systems, therefore, are to be popularized and their value to be recognized, it is necessary to divest them of their excrescences. A large mass of rubbish is to be found in the works of modern *Naiyâyikas*, and the task of extracting the pure ore out of it is very difficult; but it is worth performing. The process of sifting and cleaning will have to be repeated several times before we can really understand some of the profoundest conceptions that are interwoven in these systems. Philosophy is the stronghold of Hinduism, and the system of *Nyâya* forms as it were the back-bone of Hindu philosophy. Every other system accepts the fundamental principles of *Nyâya* logic, while even where there are differences, the dissentients often borrow the very arguments and phraseology of the *Nyâya* for their own purpose. A study of the *Nyâya* as well as *Vaiśeshika* systems is therefore a necessary step to a proper understanding of most of the systems. It forms as it were an introduction to the general study of philosophy, and hence no scholar who would seek the truth in the latter can afford to neglect them.

Among the numerous systems of philosophy that have been evolved in India during the last three thousand years, the *Nyâya* and *Vaiśeshika* occupy a unique position, both on account of their cardinal doctrines and of the mass of learning that has accumulated around them. A general view of these doctrines will not, therefore, be out of place in a sketch like this. *Nyâya*, which is the more compact and perhaps also the more modern of the two, is much more a system of dialectics than one of philosophy. The aphorisms of *Gotama* and the works founded on them treat no doubt of metaphysical and theological questions occasionally, but

they come in rather as digressions than as inseparable parts of the system. The *Vaiśeshika*, on the other hand, is essentially a system of metaphysics with a disquisition on logic skilfully dovetailed into it by later writers. It is these peculiarities which have earned them the name of logical systems and which distinguish them from each other as well as from other systems of Indian philosophy. These peculiarities must be carefully noted, for inattention to them has led many to misunderstand the true scope and function of these systems.[1]

Gotama begins by enumerating 16 topics, which have been erroneously called *padârthas*.[2] These topics are not a classification of all sublunary things or categories. They look like headings of so many chapters in a treatise on logic. Of these the first nine, *viz.* प्रमाण, प्रमेय,, संशय, प्रयोजन, दृष्टान्त, सिद्धान्त, अवयव, तर्क, and निर्णय, constitute what may be called logic proper, while the last seven may be collectively termed illegitimate or false logic. प्रमाण includes the four proofs, *Perception*, *Inference*, *Comparison* and *Word*;[3] while प्रमेय comprises all objects which are known by means of those proofs, *viz.* soul, body, organ, material qualities, cognition, mind, effort, fault, death, fruition, pain and salvation.[4] These multifarious things have obviously nothing in common except the capacity of being known by one or other of the above proofs; and *Gotama* accordingly treats of them only in that light. He rarely troubles himself about the nature or form of these things, or of their production and destruction, as *Kanâda*, for instance, does. This is the reason why *Gotama's* definitions of soul, cognition, mind, etc., only tell us how they are known, but say nothing as to what kind of things they are. *Gotama's* theory of knowledge is essentially material. *Perception* is a physical process consisting in the contact of organs with their appropriate objects;[5] while *Inference*, which is threefold,

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[1] Logic in Sanskrit is designated by various names, such as *Nyâya*, *Hetu-Vidyâ*, *Hetu-Śâstra*, *Ânvîkshikî*, *Prâmana-Śâstra*, *Tattva-Śâstra*, *Tarka-Vidyâ*, *Vâdârtha*, and *Phakkikâ-Śâstra*. Some of these names are found in works of 4th and 5th centuries B. C.

springs from *Perception.*[1] *Comparison* and *Word* are of course exceptional cases, and may be called imperfect inferences. Having thus dealt with the chief ingredients of knowledge, namely, the proof and its object, *Gotama* describes several accessories to knowledge, *viz.*, doubt, aim, instance or precedent, general truths, premises, hypothetical reasoning and conclusion. Doubt and aim as incentives to every inquiry are necessary to knowledge. Precedents and general truths form the material, while premises and hypothetical reasoning are the instruments of acquiring fresh knowledge. Conclusion is the final and combined product of all these things.[2] The seven topics forming the second group have a negative function in logic, namely, of preventing erroneous knowledge. By exposing errors they teach us how to avoid them. They are rather like weapons for destroying the enemy's fortress than tools to build one's own. Continued argument (वाद), sophistry (जल्प), wrangling (वितण्डा), fallacies (हेत्वाभास), quibbling (छल), far-fetched analogies (जाति), and opponent's errors (निग्रहस्थान)– all these are useful where the object is to vanquish an opponent or to gain a temporary triumph; but they do not legitimately belong to the province of logic. *Gotama's* treatise may therefore be appropriately called the theory and practice of controversy rather than a science of logic. It resembles in this respect the dialectical work of Zeno who founded the sophistic dialectics in Greece.

[1] The system, however, underwent considerable modifications in later times. The sixteen *padârthas* were practically ignored, and the theory of the four proofs absorbed almost the whole attention of later *Naiyâyikas*. The philosophical views of *Gotama* mostly came out in the digressions which are numerous in his work. They are generally introduced by way of illustrations to his method; and yet his followers have accepted these views as cardinal principles and built a regular system of philosophy upon them. The most cha-

racteristic of these doctrines are the non-eternity of sound[1] the agency of God,[2] the theory of atoms,[3] the production of effects,[4] and its corollary, the reality of our knowledge. From the fragmentary discussions on these points contained in *Gotama's* work the modern *Naiyâyikas* have evolved elaborate theories which have made the system what it is. The radical and realistic tendency of these later doctrines came at every step into conflict with the more orthodox views of the two *Mîmâmsâs*.

The system of the *Vaiseshikas* is even more radical than the *Nyâya*. As a system of philosophy, the *Vaiseshika* is more symmetrical and also more uncompromising. Its enumeration of the six categories,[5] with the seventh *Abhâva* added afterwards, is a complete analysis of all existing things. These categories again are not enumerated for a special purpose only, like the 16 *padârthas* of *Gotama*; but they resolve the entire universe, as it were, not excepting even the Almighty Creator, into so many classes. *Kaṇâda's* categories resemble in this respect those of Aristotle. *Gotama* treats of knowledge only, but *Kaṇâda* deals with the wider phenomena of existence. The first three categories, Substance, Quality, and Motion, have a real objective existence, and so form one group designated अर्थ by *Kaṇâda*.[6] The next three, Generality, Particularity, and Intimate Union, are products of our conception, and may be called metaphysical categories, while the last one, Negation, appears to have been added afterwards for dialectical purposes. The nine substances comprise all corporeal and incorporeal things, and the twenty-four qualities exhaust all the properties that can reside in a substance. बुद्धि is a quality of the Soul, and the whole theory of knowledge therefore consists in the production of this quality in its substratum, the Soul. The process by which the cognition of an external object is produced in the Soul is something like printing or stamping on some soft material. Mind is the moveable joint between the Soul and the various organs which carry those impressions from ex-

ternal objects. Logic as a science of knowledge falls unde गुणि, and is so treated in all *Vaiśeshika* treatises. *Vaiseshikas* recognize only the first two of the four proofs mentioned by *Gotama*,[1] and they differ from the *Naiyâyikas* on some other points also. What specially distinguishes the *Vaiśeshikas*, however, is their remarkable power of analysis ; and their system may for that reason be appropriately called analytical philosophy. They divide and subdivide each class of things, and dissect every notion into its minutest components. No doubt the process of analysis is sometimes carried to an extreme where it ends into fruitless distictions, but its influence on philosophical speculations in general must have been enormous. It is this feature of the *Vaiśeshika* system that has made it the source of all liberal thought in Indian philosophy. None are so unrestrained in their speculations, and none are such powerful critics of time-worn prejudices as the followers of *Kanâda*. No wonder then that they were looked upon with distrust by the orthodox school, and were labelled *Ardha-Vainâśikas* (Semi-Buddhists) by their opponents.[2] The *Vaiśeshikas* never declared any open revolt against orthodox faith, nor is there any reason for supposing that *Kanâda* or his immediate followers were atheists ; but the tendency of their doctrine was none the less unmistakable. As the devout Lord Bacon produced a Hume and a Voltaire in Europe, so the *Vaiśeshika* doctrines must have led ultimately to many a heresy in India, such as those of the *Bauddhas* and the *Jainas*.

A remarkable feature of both the *Nyâya* and the *Vaiśeshika* systems, as in fact of all the Indian systems of philosophy, is the religious motive which underlies them. Religion is the incentive to all these speculations, and religion is also the test of their truth and utility. Salvation is the goal which both *Kanâda* and *Gotama* promise the people as the reward of a thorough knowledge of their respective sys-

tems. Amidst all the differences one idea appears to be common to all the ancient Indian systems, namely, that knowledge is the door and the only door to salvation. Opinions only differ as to what things are worth knowing. Consequently the bitterest controversies have raged among these rivals as to what things ought to be known for the speedy attainment of salvation. These controversies usually take the form of attacks on the rival classifications of categories as be ing either defective or superfluous or illogical. Another effect of the religious character of these systems is the discussion of many apparently irrelevant topics which have made them look somewhat heterogeneous and unsystematic. The many digressions in the works of *Gotama* and *Kaṇâda* as well as their followers are easily understood if we look to the bearing which those topics have upon the end and aim of philosophy. Take for instance the controversy about non-eternity of sound.[2] What has the eternity of sound to do with logic? An inference would be just as right or wrong whether the words conveying it are eternal or not. But the question of the eternity of sound is vitally connected with the infallibility of the *Vedas* which are final authority in all matters of doubt; and all orthodox systems, therefore, must have their say on the point. We thus find that questions of the most diverse character are discussed wherever the context leads to them while others more closely related to the subject are neglected. Each system has consequently become a mixture as it were of the fragments of several sciences such as logic, metaphysics, psychology, and theology. This is not however a weakness as some superficial critics have supposed. It arises from the very conception of a *Darśana*, and could never have been avoided by those who in these systems sought to provide a complete guide, as it were to the road to salvation. Indian philosophy is not singular in this respect. Everywhere philosophy grows out of religious instincts. The sense of dependence on supernatural powers and a desire to conciliate them were the first incentives

which led men at a very early period to think of their religious well-being. "Philosophy," says Zeller, "just begins when man experiences and acts upon the necessity of explaining phenomena by means of natural causes."[1] The *Rigveda*, the *Brâhmanas* and the *Upanishads* abound in passages showing how in India this feeling grew in intensity until it became the ruling passion of the Brahmans. Salvation was the sole purpose of life, and knowledge of the universe was the means to it. The ancient *Upanishads* were the repositories of the speculations which rose like bubbles out of this fermentation of thought, and which appear to have ultimately crystallized into the various systems of philosophy.[2] In Greece philosophy tended to become more and more ethical and worldly; in India it could never free itself from its religious setting. This is the reason why in spite of additions and modifications Indian *Darśanas* never lost their original character completely. A history of each of these systems is therefore a history of its gradual evolution within certain limits, while its relations outside of them remained practically unchanged.

The period before the rise of Buddhism is almost a blank page. We know nothing of it except that a large amount of free speculation must have been stored up at that time in the *Brâhmaṇas* and the *Upanishads*. The only system which dates prior to Buddhism is the *Sâṅkhya*, and possibly the *Vaiśeshika* also; but all the other *Darśanas* are presumably of a post-Buddhistic origin, at least in the form in which we possess them. In fact the very notion of a system seems to be post-Buddhistic. The severe conflict between Buddhism and Brahmanism which stirred men's minds in the century after Buddha's death must have compelled both the parties to systematize the doctrines and express them in a compact methodical form.

The same cause or causes which led the Buddhists to collect their ethical and philosophical teachings in their *suttas* during the period which elapsed between the first and the second Council must have also induced their Brahman rivals to compose similar works for the defence of Vedic orthodoxy. The two collections of aphorisms belonging to the Prior and the Posterior *Mîmâmsâs* and known by the names of *Jaimini* and *Bâdarâyana* respectively have a strong controversial flavour about them, and appear to be the first products of this reaction against Buddhism. The aphorisms of *Kanâda* and *Gotama* could not have been of any prior date, and as we do not know of any *Nyâya* or *Vaiśeshika* works older than these *Sûtras*, the history of those systems may safely be said to begin in the 5th or the 4th century before Christ.

Roughly speaking the literature of the *Nyâya* and *Vaiśeshika* systems extends over a period of 22 centuries, that is, from about the 4th century B. C. till very recent times, of which the last two hundred years, not being distinguished by any original works, may be left out of account. The history may be divided into three periods: the first from about 400 B. C. to 500 A. D., the second from thence to 1300 A. D., and the third after that till the end of the last century. The only known representatives of the first period are the two collections of aphorisms going under the name of *Gotama* and *Kaṇâda* respectively, and perhaps the scholium of *Praśastapâda* also; but there must have existed other works now lost. The second period is preeminently distinguished by a series of commentaries on these *Sûtras* beginning with *Vâtsyâyana* and comprising several works of acknowledged authority. The third period saw the introduction of independent treatises and commentaries on them which at last dwindle down into short manuals like *Tarka-Sangraha* and *Tarka-Kaumudî*. These three periods also mark three successive stages in the development of the two systems. The first may be called the age of the formation of doctrines in the *Sûtras*; the second that of their elaboration by commentators; and the third that of their systematization by writers of special treatises. The

first is characterised by great originality and freshness, the second by a fulness of details, and the third by scholastic subtlety ultimately leading to decadence. These divisions may sometimes overlap, for we have treatises like *Târkika-rakshâ* and *Sapta-padârthî* before the 14th century, so we have commentaries on the *Sûtras*, like *Śankara Miśra's Upaskâra*, and *Viśvanâtha's Vṛitti*, written afterwards. This does not however affect our general conclusion that the writings of the 14th century and onwards are in marked contrast with those of the preceding age. The exact duration of these periods may have varied a little in the case of the two systems, but the order is the same. The mutual relation of these two systems, however, appears to have changed at different times. During the first period they seem to have been two different systems, independent in origin but treating of the same topics and often borrowing from each other. *Vâtsyâyana* regards them as supplementary.[1] In the second period, however, they become somewhat antagonistic, partly owing to an accumulation of points of difference between the two, and partly on account of the alliance of the *Vaiśeshikas* with the Buddhists. The third period saw the amalgamation of the two systems, and we come across many works, like the *Tarka-Saṅgraha* for instance, in which the authors have attempted to select the best portions of each and construct from these fragments a harmonious system of their own. This is a curious phenomenon, no doubt, and we do not yet sufficiently know the causes which brought about these successive changes in the attitude of the exponents of these two systems towards each other; but the fact is important in as much as it must have been a powerful factor in moulding both of them. At any rate it accounts for the difficulty, which every student meets with at the threshold, whether to regard these systems as really supplementary or antagonistic to each other. They are spoken of as both, and yet no Sanskrit writer seems to have perceived the inconsistency of doing so. The only explanation that can at present be suggested is that the

twins after quarrelling for some time reunited under the influence of a reaction.

Having premised so much we may proceed to consider the three periods in order ; and the first thing we shall have to do is of course to fix the age of the *Sûtras* of *Gotama* and *Kaṇâda.* They are the recognized basis of the *Nyâya* and the *Vaiśeshika* systems, and they are so far as we know the oldest works on those systems. Not that they were the first of their kind; perhaps they were preceded by cruder attempts of the same sort that have perished ; perhaps the present works are improved editions of older ones. For all practical purposes, however, the works of *Kaṇâda* and *Gotama* may be taken as the starting points for the two systems. Now before adverting to the evidence that exists for determining the dates of these two *Sûtras* it is necessary to notice one or two misconceptions that would otherwise hinder our task. The first of these is the confusion that is often made between the system and the *Sûtra* work expounding it ; and the second is a similar want of distinction between the systems as a whole and the particular doctrines composing it. The three things, *viz.*, *Gotama's* work, the *Nyâya* system, and the individual doctrines embodied in it, are quite distinct, and ought not to be confounded with one another. They may for aught we know have originated at different times, and no inference can therefore be safely drawn as to the probable date of the one from any ascertained fact relating to the other. The fact for instance that some of the *Vaiśeshika* doctrines are controverted in *Bâdarâyaṇa's Brahma-Sûtras*[1] has been made the ground for inferring that *Kaṇâda's Sûtras* were composed prior to those of *Bâdarâyaṇa*, and yet there are cogent reasons for believing that they were of a much later origin. We must therefore suppose that the doctrines controverted in *Brahma-Sûtras* existed prior to their incorporation into a regular system as set out in *Kaṇâda's* work. Similarly many of the arguments as to the relative priority of *Nyâya* and *Vaiśeshika* systems are based on assumptions made from some doctrines of the one being cited or refuted by the other. Such argu-

[1] *Brahma-Sûtras*, II, 2, 11, *et. seq.*

ments however are misleading and often produce confusion. The *Nyâya* doctrine of असत्कार्यवाद् must have existed before the rise of Buddhism and even before the formation of the *Sâṅkhya* system, the oldest works of which controvert it. Does it follow therefore that *Gotama* and *Kaṇâda* preceded both the *Sânkhyas* and the *Bauddhas* ? And if so, how are we to account for the fact that several doctrines of the *Sâṅkhyas* as well as the *Bauddhas* are in their turn quoted in the *Sûtras* of both these authors ? Here is a dilemma which can only be solved by supposing that the doctrine of असत्कार्यवाद् and many others like it subsequently adopted by the *Naiyâyikas* and *Vaiseshikas* must have formed topics of hot discussion long before the *Sûtras* of *Gotama* and *Kaṇâda* were composed. In like manner, even supposing that the system as such existed at or before a particular date it will not be right to argue that *Kaṇâda's Sûtras* also must have existed at that time.[1] Nor should it be supposed that the whole system as conceived later is to be found in these works. Many doctrines now looked upon as cardinal principles of *Vaiśeshika* philosophy, are conspicuous by their absence in *Kaṇâda's* work, such as, for instance, *Abhâva* as a seventh category, the last seven qualities, and the doctrine of *Viśesha.* This much however is certain, that when the *Sûtras* were composed the two systems had assumed a definite form which was never to be substantially changed. There are important gaps that were filled up afterwards; but the skeleton is there and it is the skeleton that gives shape to the body. The process may have been something like this. First bold thinkers started theories of their own on the burning questions of the day, and then these theories after much discussion crystallized into specific doctrines such as those of असत्कार्य, समवाय and others. The ancient *Upanishads* abound in passages in which we find such definite principles being actually worked out of a mass of general speculations. The next step is for some eminent

teacher to adopt and develop some of these doctrines and form a school which might in time grow up into a system. The difference between a school and a system is that of degree. A school adopts a theory about a particular phenomenon, while a system aims at explaining consistently the whole order of nature by reducing several of these theories into harmony. *Auḍulomin*, *Kâśakṛitsna*, *Bâdari*, and many others whose names occur in the philosophical *Sûtras*, seem to have been founders of the schools which preceded the regular systems. The system when thus formed required an authoritative exposition, and many must have been the failures of inferior persons, before a master mind like *Gotama* or *Kaṇâda* could produce a work that would live into futurity. The present *Sûtras* of *Kaṇâda* and *Gotama* must, therefore, be regarded as representing the end rather than the commencement of this evolutionary process. They did not originate the systems, they only stereotyped them, by giving them as it were a body and shape. Besides, it is probable that the fashion of propounding philosophical systems in the form of *Sûtras*, if not the systems themselves, came into vogue after the rise of *Buddhism*. The ethical teachings of *Gautama Buddha* were expressed in the shape of pithy sentences which were easy to remember and possessed a certain attraction for the popular mind. The Brahmans, probably with a desire to beat their rivals with their own weapons, composed *Sûtras* on their own philosophical systems modelled on the Buddhistic *suttas*, and possessing in some cases literary finish of a very high order. The necessity of meeting their opponents in controversies which became frequent from this time compelled the orthodox philosophers to put their cardinal doctrines in a definite shape; and this they did by expressing them in an incisive and dogmatic form so as to produce immediate conviction. The uncompromising tone and rigid logic of these post-Buddhistic *Sûtras* are in strong contrast with the loose reasoning and poetical imagery which abound in earlier philosophical books, such as the *Upanishads*. While morality was the stronghold of the Buddhists, philosophy was their weakest point in these early times;

naturally the shrewd Brahmans cultivated this latter branch with the greater vigour in order to outshine their rivals. The *Sûtras* of *Jaimini* and *Bâdarâyaṇa* must have been composed with some such object in view; and the example, once set, was of course followed by other teachers belonging to the orthodox party.

It is difficult to determine the chronological order of the several systems of philosophy, and the attempts hitherto made have not been very successful. The *Sâṅkhya* system and many of the doctrines of the *Vaiśeshikas*, if not the whole of their system, are most probably Pre-Buddhistic. The *Vaiśeshika* system pre-supposes the *Sâṅkhya*, and there is evidence to show that the *Vaiśeshika* not only preceded Buddhism and Jainism, but directly contributed to the rise of those sects, many of their peculiar dogmas being closely allied to *Vaiśeshika* theories. The Buddhistic doctrines of total anihilation, for instance, is only a further and an inevitable development of the *Vaiśeshika* doctrine of असत्कार्यवाद; while the categories or *Padârthas* of the latter find their counterpart in the five *Âstikâyas* or essences of the *Jainas*. The atomic theory moreover is largely adopted by the *Jainas*, and even enters into their legendary mythology. The epithet *Ardha-Vainâśikas* or Semi-Buddhists, contemptuously bestowed upon the *Vaiśeshika* by *Śânkarâchârya*,[1] concealed a historical truth, if the *Vaiśeshikas* as suggested above were the half-hearted precursors who by their materialistic speculations paved the way for the extreme radicalism of *Gautama Buddha*. The *Vaiśeshika* school is specifically named in the sacred texts of the *Jainas* and also in the *Lalita-Vistâra*.[2] Several of their doctrines are refuted in *Bâdarâyaṇa's Brahma-Sûtras*, and it is possible that they may have existed then in some systematic form. As to the other systems, the two *Mîmâṁsâs* appear to have come immediately after the rise of Buddhism and before the advent of the *Nyâya* and the *Yoga*. Neither

Bâdarâyaṇa nor *Jaimini* refers to any peculiar *Nyâya* doctrine, while the few aphorisms in *Bâdarâyaṇa's* work which mention *Yoga* look like interpolations. It will be shown presently that *Gotama* himself borrows from *Bâdarâyaṇa's* work.[1]

Looking to the *sûtras*, however, the two *Mîmâṃsâ* collections appear to be the oldest of them, while the works of *Gotama* and *Kaṇâda* come next in succession. The date of *Jaimini* and *Bâdarâyaṇa*, who quote each other and might have been contemporaries, is not yet settled. They are certainly aware of the Buddhistic sect, many of whose doctrines they quote and refute.[2] The two *Mîmâṃsâ Sûtras* therefore could not have been composed before the 6th century B. C. They may for the present be assigned to the 5th or the earlier part of the 4th century B. C. The *Sûtras* of *Gotama* and *Kaṇâda* must be still later productions, as will appear from a comparison of them with the *Brahma-Sûtras*. The opening *sûtras* of both *Gotama* and *Kaṇâda* appear to recognize the *Vedântic* doctrine of knowledge being the means to salvation; while throughout their works whenever they treat of soul, salvation, pain, knowledge, and such other topics, their language seems to be strongly tinged with *Vedântic* notions. The phraseology is often the same, and in several places even direct references to the *Brahma-Sûtras* may be detected in these works. For example the *Vaiśeshika sûtrâs*, अनित्य इति विशेषतः प्रतिषेधभावः and अविद्या[3] appear to be answers to *Bâdarâyaṇa's* objections to the eternity of atoms[4]; while the *Sûtra* अहमिति शब्दस्य व्यतिरेकान्नागमिकम्[5] is evidently aimed at the *Vedântic* view explained in the four preceding *sûtras*, that the Soul is to be known only through *Śruti*.[6] Similarly V. S. IV, 2, 2-3 controvert the *Vedântin's* view that our body is formed by

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[1] Garbe holds that *Vaiśeshika* was prior to *Nyâya*: *Vide*, Die Sāṃkhya Philosophie, p. 116.

[2] *Brahma-Sûtra* II, 2, 18, *et seq*; *Mîmâṃsâ-Sûtra* 1, 2, 33; see also Colebrooke's *Miscellaneous Essays*, Vol. I, p. 354.

[3] V. S. IV, 1. 4-5.

[4] *Brahma-Sûtra* II, 2, 14-15.

[5] V. S. III, 2, 9.

[6] Cf. also V. S. III, 1, 28-30.

the union of five or three elements.[1] Again many of the terms used by *Kanâda*, such as अविद्या, लिङ्ग, प्रत्यगात्मा, and व्याख्यात, appear to be borrowed from *Bâdarâyana*. The same holds good of *Gotama*. In several places he propounds views very similar to well-known *Vedântic* doctrines[2]; while a comparison of G. S. III, 2, 14 with *Brahma-Sûtra* II, 1, 24 will show that *Gotama* borrows even illustrations and arguments from *Bâdarâyana*[3] G. S. II, 1, 61-67[4] would likewise show that *Gotama* was also posterior to *Jaimini*. It may be argued that the borrowing may have been on the other side, or that the particular *sûtras* may be later additions. But we must in such cases judge by the whole tone and drift of authors. While in all the cases noted above the topics form essential parts of the two *Mîmâmsâ* systems, they come only incidentally in the works of *Kanâda* and *Gotama*. We can, therefore, confidently assert that the works of *Gotama* and *Kanâda*, as we have them at present, cannot be older than the 4th century B. C.

The question as to the relative priority of these two systems *per se* is beset with many difficulties. Opinions have been advanced on both sides. *Chandrakânta Tarkâlankâra*, in the preface to his edition of *Vaiseshika-sûtras*, strongly contends for the priority of *Vaiseshika* system, while others maintain the opposite view.[5] Goldstücker calls the *Vaiseshika* only a branch of the *Nyâya* without deciding their relative priority; while Weber is undecided on the point. Much of the confusion, however, on this point can be avoided by making a distinction, as already noted, between the *Vaiseshika* system and the *Vaiseshikâ sûtras*. There are strong grounds for believing, as Mr. *Tarkâlankâra* contends, that the *Vaiseshika* system preceded *Gotama's* and yet the *Sûtras* of *Kanâda* or at least many of them, may be of a

[1] *Brahma-Sûtra* II, 2, 21-22. [2] Cf. G. S. IV, 1, 64

[3] क्षीरविनाशे कारणानुपलब्धिवद्दध्युत्पत्तिवच्च तदुत्पत्तिः । *Gotama-Sûtra*; उपसंहारदर्शनान्नेति चेन्न क्षीरवद्धि । *Brahma-Sûtra*.

[4] विध्यर्थवादानुवादवचनविनियोगात् G. S. II, 1, 61.

[5] Bhîmâchârya : *Nyâya-Kosha*, Intro., p. 2 3, note.

[6] Goldstücker's *Pânini*, p. 153.

Weber *History of Indian Literature*, p 245.

later date. The fact that, while *Vaiśeshika* doctrines are noticed in *Bâdarâyana's Brahma-Sûtras*, *Gotama's* system is not even once alluded to, shows that some *Vaiśeshika* doctrines at least were promulgated not only before *Gotama* but even before the composition of the *Brahma-Sûtras*. *Vâtsyâyana's* remark that omissions in *Gotama's* work are to be supplied from the cognate system of the *Vaiśeshikas* may likewise be taken to imply that that system existed before *Gotama's* time[1]; while the latter's reference to a प्रतितन्त्रसिद्धान्त,[2] by which he probably means doctrines taught by some allied school such as the *Vaiśeshikas* would support such an inference. The posteriority of *Gotama* may also be inferred from the fact that many topics summarily disposed of or imperfectly discussed by *Kaṇâda* are fully treated by him, as for instance inference, fallacies, eternity of sound, and the nature of soul. It is true that some of these arguments would also prove that *Kaṇâda's sûtras* were anterior to *Gotama's* work, and it is possible that a collection of *Vaiśeshika sûtras* was known to *Gotama*. But we must also take account of the fact that several *sûtras* in the present collection of *Kaṇâda's* aphorisms appear to be suggested by *Gotama's* work.

V. S. III, 2, 4,[3] for instance, is clearly an amplification of G. S. I, 1, 10.[4] V. S. III, 1, 17[5] again gives an illustration of the अनैकान्तिक fallacy, although the name, strange to say, is nowhere explained throughout *Kaṇâda's* work. The word is, however, used by *Gotama* as a definition of सव्यभिचार,[6] and it is possible that the author of the *Vaiśeshika sûtras* borrowed it from him, and wrongly used it as the name of the fallacy. These *sûtras*, therefore, if

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[1] *Vât.* on G. S. 1, 1, 4. [2] G. S. I, 1, 29.

[3] प्राणापाननिमेषोन्मेषजीवनमनोगतीन्द्रियान्तरविकाराः सुखदुःखेच्छाद्वेषप्रयत्नाश्चात्मनो लिङ्गानि *Vaiśeshika-Sûtra.*

[4] इच्छाद्वेषप्रयत्नसुखदुःखज्ञानान्यात्मनो लिङ्गमिति । *Gotama-Sûtra.*

[5] यस्माद्विषाणी तस्माद्गौरिति चानैकान्तिकस्योदाहरणम् ।

[6] अनैकान्तिकः सव्यभिचारः G. S. 1, 2, 46.

not the whole work of *Kanâda*, must have been composed after *Gotama's* work was published. Now there are good reasons for suspecting that *Kanâda's* work, as we have it at present, contains a large number of aphorisms which have been either modified or added in after times. A comparison of *Kaṇâda's sûtras*, as found in our printed editions, with the *Bhâshya* of *Prâśastapâda* shows that many of the *sûtras* are not explained by the scholiast and were probably unknown to him.[1] Moreover, all these suspicious aphorisms relate to topics that look like having been suggested afterwards. The practice of making such interpolations in ancient works is not uncommon in Indian literature. The *Sâṅkhya-Sûtras* are notoriously modern productions, though ascribed to an ancient *Rishi* ; and even the *Brahma-Sûtras* of *Bâdarâyana* lie under the suspicion of being tampered with. The loose and unsystematic arrangement of the *Vaiśeshika* aphorisms must have considerably facilitated the task of an interpolator, while such liberties could not have been easily taken with the more compact and finished production of *Gotama*.[2]

The most reasonable conclusion that may be drawn from the foregoing facts is that, although we can say nothing definite about an original collection of *Vaiśeshika* aphorisms, the present work of that name is comparatively modern. We have no materials at present to fix its probable age. *Kaṇâda* is a mythical personage and is variously styled *Kâśyapa*, *Kaṇabhaksha* or *Kaṇabhuk*. The latter

[1] See the excellent conspectus showing the *sûtras* corresponding to each section of *Praśastapâda's* scholium, prefixed to the Benares Edition of that work.

[2] Mahamâhopâdhyâya Satischandra Vidyabhushan thinks that only the 1st book of *Nyâya-Sûtras* was composed by *Akshapâda*, while the 2nd, 3rd and 4th books bear marks of different hands. The later books contain passages from *Lankâvatâra Sûtra* of *Yogâchâra* Budhistic school, the *Mâdhyamika Sûtra* of *Nâgârjuna* and *Śataka* of *Âryadeva* all composed about 300 A. D. *Vâtsyâyana* is said to have collected all the later additions together. See Bhandarkar Commemoration Volume p.161.

[3] P. B. Ben. ed. p. 200 ; V. S. Up. Calc. ed. p. 160-1 ; *Trikaṇḍa-Śesha*.

two appellations are, of course, paraphrases of *Kanâda*, which literally means "an eater of seeds or atoms."[1] The name is said to be derived from his having lived upon picked-up grain-seeds while practising austerities; more probably it is a derisive appellation invented by antagonists for his atomic theory. The system is also called *Aulûkya Darśana*,[2] and a pretty old tradition is told that God Mahâdeva pleased by the austerities of the sage *Kaṇâda* appeared to him in the guise of an owl and revealed the system which the latter subsequently embodied in the *Sûtras*.[3] A Ṛishi named *Ulûka* is mentioned in the *Mahâbhârata*, but nothing can be said as to what connection he had with the *Vaiśeshika* system. The name *Âulûkya* is, however, considerably old, being mentioned by *Udyotakâra* and *Kumârila*. The name *Vaiśeshika* occurs even in the scholium of *Prâśastapâda*, who also refers to the tradition about God Mahâdeva just mentioned.[5] *Vâyu-Purâṇa* makes *Akshapâda*, *Kaṇâda* and *Ulûka* sons of *Vyâsa*,[6] but no reliance can be placed on such an authority.

It has been already shown that the present collection of *Vaiśeshika* aphorisms is posterior to the 4th century B. C., and the references to it contained in *Vâtsyâyana's* commentary on *Gotama's* work prove that it must have existed before the 5th century A. D. *Vâtsyâyana* mentions it as समानतन्त्र, enumerates the six categories[7] and actually quotes one aphorism of *Kaṇâda*.[8]

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[1] Sugiura on the authority of a Chinese work *Ishiki Jutsuki* says he was called rice-eater because he used to go out and eat rice obtained from women, while he was called Ulûka, because he lived in a mountain and was very ugly. Vide Sugiura's *Hindu Logic as preserved in China and Japan* p. 14.

[2] *Sarv. D. S.* Calc. ed. p. 110.

[3] Bhîmâchârya : *Nyâya-Kosha*, Intro. p 2.

[4] *Nyâya-Vârtika*, Bibl. Ind. p. 168 ; *Tantra-Vârtika* I., 1, 4.

[5] P. B. Ben. ed. p. 234.

[6] See the verses quoted in P. B. Ben. ed. Intro. p. 10.

[7] अस्त्यन्यदपि द्रव्यगुणकर्मसामान्यविशेषसमवायाः प्रमेयम् । तद्भेदेन चाऽपरिसङ्ख्येयम् । *Vât.* on G. S. I, 1, 9.

[8] यस्माद्विषाणी तस्मादश्व इति (V. S. III, 1. 16) किमनुमानामिति चेत् सन्तानोपपादि- रुपपादितःशब्दसन्तान. etc. । *Vât* on G. S. II, 2, 36.

This is the utmost that we can say with certainty about the age of *Kaṇâda's* work. The date of *Praśastapâda*, the earliest scholiast of *Kaṇâda*, is equally uncertain. He cannot be the same as the *Rishi Praśasta* mentioned in the *Pravarâdhyâya* of *Baudhâyana-Sûtra* for *Baudhâyana-Sûtra* being composed before the 4th century B. C.,[1] *Praśastapâda* and *a fortiori Kaṇâda* would have to be placed long before that time. *Praśastapâda* has also been identified with *Gotama*, the author of *Nyâya-Sûtras*,[2] but it seems to be a mistake. So no inference as to the age of the *Vaiśeshika-Sûtras* can be drawn from the date of the commentator. The six categories as well as the proofs are mentioned in the medical work of *Charaka*, who has been identified with *Patañjali*, the author of the *Mahâbhâshya*.[3] But even if this identity is correct, the original work of *Charaka* having been subsequently recast and enlarged by *Dṛidhabala*, particular passages from it cannot be relied upon for historical purposes.

Happily we can obtain better results in the case of *Gotama's* work. That it is posterior to the rise of Buddhism is evident on its face, for Buddhistic doctrines are expressly mentioned therein.[4] It is also, as has been already shown, later than the latter part of the fifth century B. C., the time of *Bâdarâyaṇa's Brahma-Sûtras* which, while refuting *Vaiśeshika* doctrines, make no mention of the cognate school of *Naiyâyikas*. Goldstücker says that both *Kâtyâyana* and *Patañjali* knew of the *Nyâya Sûtras*.[5] Now *Patañjali* is said to have written his great work about 140 B. C.[6]; but *Kâtyâyaṇa's* date is not so certain. According to a story told in *Kathâ-Sarit-Sâgara*, *Kâtyâyana* was a pupil of *Upavarsha* and a minister of king *Nanda* who reigned about 350 B. C.[7] Goldstücker makes light of the authority of

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1 Bühler : Sacred Laws (S. B. E. Series) Part I *Âpastamba*, Intro. p. XXII.

2 Bhîmâchârya : *Nyâya Kosha* Intro. p. 2.

3 *Parama-Laghu-Mañjûshâ*. A verse said to be from *Yogabîja* calls *Patañjali*, a writer on three sciences, grammar, medicine, and *Yoga*.

4 G. S. III, 2, 11-13

5 Goldstücker's *Pâṇini*, p. 157.

6 Ibid p. 234.

7 *Kathâ-Sarit-Sâgara* 1, 5, Max Müller : *History of Ancient Sanskrit Literature*, p. 240.

Kathâ-Sarit-Sâgara, but it is hard to believe that such a story could have got currency without some sort of foundation. If the story is true the *Nyâya-Sûtras* would have to be placed before 350 B. C. *Kâtyâyana's* date is now generally taken to be about the middle of the 4th century B. C.[1]: and so *Gotama* will have to be placed before that time. There is another fact which confirms this conclusion. *Śabara Svâmin*, the scholiast on *Jaimini's Sûtras*, often quotes an ancient author whom he calls *Bhagavân Upavarsha*, and who must have, therefore, lived a long time before him. This *Upavarsha* is said to have written commentaries on both the *Mîmâmsa Sûtras*.[2] If he be the same as the reputed teacher of *Kâtyâyana* above mentioned, he must have lived in the first part of the 4th century B. C.[3] Now a passage quoted by *Śabara Svâmin* from the commentary of this *Upavarsha*[4] shows that he was intimately acquainted with *Gotama's* system and largely adopted its doctrines. *Gotama's* work must, therefore, have been composed before the 3rd century B. C., that is, it belongs to the 4th century B. C.[5]

There is another piece of evidence, which, though apparently conflicting with the above conclusion, really supports it. *Âpastamba* the author of the *Dharma-Sûtra*, knew both the *Pûrva* and the *Uttara Mîmânsâ* systems, but not the *Nyâya*.[6] It is true that *Âpastamba* in two passages of

[1] Eggeling's *S'âtapatha-Brâhmaṇa* (S. B. E. Series) Intro. p. 30.

[2] Colebrooke's *Miscellaneous Essays*, Vol. I. p. 357.

[3] Another story in Somadeva-Bhaṭṭa's *Kathâ-Sarit-Sâgara* makes him live in Pâṭaliputra during the reign of Nanda, *i. e.*, about 350 B. C; but no reliance can be placed on the chronological data furnished by this book in the absence of other evidence.

[4] *Śabara-Bhâshya*, *Bibl. Ind.* p. 10 , for an English translation of the passage see Colebrooke's *Miscellaneous Essays*, Vol. I. p. 328.

[5] This conclusion will not be affected by any date that may be assigned to Paṇini. Goldstücker places Pâṇini long before the rise of Buddhism and holds that he did not know Gotama's work. Pâṇini mentions the word न्याय but only in the sense of a syllogism or rather a thesis, such as those in Jaimini's work. See Goldstücker's *Pâṇini*, p. 152.

[6] Bühler : *Sacred Laws* (S. B. E. Series) Part I *Âpastamba*, Intro. p. xxvii.

his work uses the word न्याय and न्यायवित् respectively[1]; but there he clearly refers to *Pûrva-Mîmâmsâ*, and not to the system of *Gotama*. Nor is this use of the word uncommon in ancient writings. The fact that the word न्याय, which was subsequently monopolized by the followers of *Gotama*, is applied by *Âpastamba* to the system of *Jaimini*, shows that at his time *Gotama's* system was either unknown, or at least so new as not to have attained any wide celebrity. *Âpastamba* according to Buhler must have lived before the third century B. C. and even 150 or 200 years earlier[2]; but his knowledge of the two *Mîmâmsâs* shows that he could not have lived long before 400 B. C. *Gotama's* work must therefore be assigned to the end of the 5th or the beginning of the 4th Century B. C.

It is needless to state after this that our *Gotama* is quite different from *Gotama* the author of a *Dharma-Sûtra*, who preceded *Baudhâyana* and was *a fortiori* prior to *Âpastamba*[3]; nor has he anything to do with the mythical sage of that name mentioned in the *Râmâyana* and *Mahâbhârata* as the son of *Utathya* and the husband of *Ahilyâ*. Nothing is known about the personality of our author, and it is even doubtful whether his real name was *Gotama* or *Gautama*. Being a Brahman he could not have belonged to the race from which the founder of Buddhism sprang. He is also called *Akshapâda* or *Akshacharana*, but the origin of the name is not known. Some have conjectured that the epithet was a nick-name given to *Gotama* for his peculiar theory of sensual perception, and means one who stands or walks upon organs of sense (अक्ष); but there is no authority for this. At any rate the author, whoever he may be, possessed great originality and a grasp of general principles that enabled him to systematize the science of logic for the first time. He cannot, however, be said to have founded it, for logical rules seem to have prevailed even before his time. *Manu* proclaims the need of reason for a correct understanding of the sacred law[4], while

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[1] *Âpastamba-Dharma-Sûtra* II, 4, 8, 13 ; and II, 6, 14, 13.

[2] Bühler : *Sacred Laws* (S. B. E. Series) Part I, *Âpastamba*, Intro. p. xliii.

[3] *Ibid.* p. xx and lv.

[4] *Manu-Smriti* xii, 106.

Bâdarâyaṇa goes to the other extreme of declaring the utter futility of our reasoning power to discover truth.[1] Besides, it is quite obvious that, unless the art of reasoning had been practised for a long time previous, and had been considerably developed, neither the philosophical speculations in the *Upanishads* nor the rise of heretical sects, such as the *Chârvâkas*, *Bauddhas* and *Jainas*, could have been possible. What then did *Gotama* achieve ? What is his place in the history of Indian logic ? This is an interesting question, and would, if satisfactorily answered, throw a flood of light on the early history of Indian philosophy.

Gotama was certainly not the pioneer. The very fact that he has evolved a logical system complete and well knit in all essential respects would lead us to suspect that he must have used materials left by his predecessors and profited by their errors. This is not a mere inference however, for *Vâtsyâyana* in his Commentary on G. S. I, 1, 52, actually tells us that there was a school of *Naiyâyikas* who required ten premises in a syllogism, and that *Gotama* reduced their number to five.[2] This is quite probable, for Indian systematists always favour brevity, and even *Gotama's* five premises were subsequently reduced by others to three. *Gotama* therefore, must have been preceded by other labourers in the same field whose works have been eclipsed by his superior treatise. External evidence would lead us even a step further. The two passages from *Âpastamba's Dharma-Sûtra*, referred to above, show that the word न्याय was formerly applied to *Pûrva-Mîmâṁsâ*. Similar passages are also found in many ancient *Smṛitis* and also some modern works in which the same word or its derivatives are used in connection with *Jaimini's* system. So late a writer as *Madhavâchârya* calls his epitome of *Jaimini's* work न्यायमालाविस्तर, while many other *Mîmâṁsâ* works have न्याय as part of their title. The various theses propounded in *Jaimini's* work are called *Nyâyas*, and even *Pâṇini* uses the word

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[1] *Brahma-Sûtra* II, 1, 11.

[2] *Vât.* on G. S. I., 32.

in a similar sense.[1] How then are we to explain the fact that a word so generally used by the *Mîmâmsakas* came afterwards to designate the rival and totally dissimilar system of *Gotama*? As a general rule we find that when a new school arises it coins its own phraseology to distinguish itself from its predecessors. In this case, however, the followers of *Gotama* appropriated an old word, and that word stuck to them so fast as to become afterwards their exclusive property. The explanation, it seems, lies in the fact that the science of logic which afterwards developed into a separate system was originally the child of *Pûrva-Mîmâmsâ*.

Analogy of other arts and sciences points to the same conclusion. All sciences in India appear to have sprung out of sacrificial necessities. Astronomy was founded on the rules by which Vedic *Rishis* ascertained the correct time for performing periodical sacrifices, from the movements of heavenly bodies. While medicine had its germ in the analysis of the properties of *Soma* plant and other sacrificial substances, music was first cultivated by the *Udgâtṛi* priest for singing his *Sâman* hymns, and a knowledge of architecture and geometry was found to be essential in constructing the sacrificial pandal and the *Vêdî*. It is probable, therefore, that the art of reasoning also originated in some requirement of the all important sacrifice. Such requirements were mainly two, the correct interpretation of vedic texts on which the due performance of the sacrifices depended, and victory in the philosophical and other discussions which were usually held in the intervals of sacrifices. It was a special function of the *Brahman* priest to give decisions on any disputed points that might arise in the course of a sacrifice, and this he could not have done unless he was a master of ratiocination. Such decisions which may be likened to the chairman's rulings in a modern assembly, are scattered through the ancient *Brâhmanas*, and are collected together as so many *Nyâyas* in the ancient *Pûrva-Mîmâmsâ* aphorisms of *Jaimini*. The philosophical disquisitions were collected in the various

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[1] Pâṇini's *Sûtra* III, 2, 122.

Upanishads and produced the system of *Uttarâ-Mîmâṁsâ*. *Jaimini* lays down many rules of exegesis which seem to be the direct progenitors of the logical rules of *Gotama*. The various tests for instance illustrated in the third chapter of *Jaimini's* attempt to determine whether a rite or a *Vedic* direction is principal or auxiliary are only so many varieties of inference. The लिङ्ग so often mentioned by *Jaimini* must have suggested the हेतु and अपदेश of *Gotama* and *Kanâda* respectively. We may therefore suppose that it is the *Mîmâmsakas* who, first prompted by exegetical necessity, developed sundry rules of logic which they illustrated by means of what they called *Nyâyas* or theses. 'When therefore *Manu* or *Apastamba* speaks of तर्क or न्याय we must understand by the term these rules of inference as applied to Vedic interpretation. The utility of these rules for other purposes, founded as they mainly are on the broad basis of common sense, could not have but been perceived very soon and naturally taken advantage of. This secularization so to say of these exegetical rules of *Pûrva-Mîmâṁsâ* gave birth to a science which was at first known by the name of आन्वीक्षिकी.' It probably got its modern appellation of *Nyâya*, when *Gotama* raised it into a philosophical system by including in his treatise disquisitions on sundry metaphysical topics, such as the origin of knowledge, eternity of sound, nature of proof and the agency of God. If this hypothesis is correct, we can form a tolerably clear idea of the task *Gotama* set before himself and which he has performed so admirably. From a bundle of experimental rules which were known only as a secular art called आन्वीक्षिकी and said by some to be subsidiary to अथर्ववेद, *Gotama* evolved a system which at once became the rival of the two *Mîmâṁsâs* and which from thence forward exercised a strong sway over generations of Indian Pandits. *Gotama* can very well be compared in this respect with Aristotle or Immanuel Kant. Nay in one sense his influence has been even greater; for Kant and Aristotle failed to supplant their predecessors completely, while *Gotama* constructed a new system, as it were, which eclipsed all previous attempts and which has from his time become the sole standard for posterity.

The work of Gotama differs in many respects from that of *Kanâda.* While the former is methodical and details a system of logic practically complete, the latter discloses no consistent aim and no arrangements of parts. It has the the appearance of a loose bundle of critical notes on the principal philosophical topics of the day. This fact raises a doubt as to whether *Kanâda's* aphorisms were ever the real basis of the *Vaiśeshika* system as we find it now. The oldest exponent of the complete system as described in all modern *Vaiśeshika* works is *Praśastapâda*, and he may for aught we know, be its real founder also. The supposition is not so improbable as it might appear at first sight. Almost all the peculiar doctrines that distinguished the later *Vaiśeshikas* from the *Naiyâyikas* and other schools are to be found in *Praśastapâda's* work and are conspicuously absent in *Kanâda's Sûtras.* The doctrines about द्वित्व, पाकजोत्पत्ति, विभागजविभाग, and several others, which are regarded as peculiarities of the *Vaiśeshika* system, are not even touched upon in *Kanâda's* aphorisms, although they are pretty fairly discussed in *Praśastapâda's Bhâshya.* The seven categories on which the whole *Vaiśeshika* system is based are probably an afterthought; and even the doctrine of विशेष which according to some gave the name to the system appears to be a later development. *Kanâda* restricts the word अर्थ (categories properly so called) to three things only, द्रव्य गुण and कर्म;[1] *Praśastapâda* enlarges the number to six, and some later author added अभाव.[2]

It is true that the aphorism धर्मविशेषप्रसूताद् द्रव्यगुणकर्मसामान्यविशेषसमवायानां पदार्थानां साधर्म्यवैधर्म्याभ्यां तत्त्वज्ञानान्निःश्रेयससिद्धिः[3] enumerates the six categories; but this aphorism is most probably a later interpolation. It is inordinately long, unlike other aphorisms of *Kanâda*, and contains a number of distinct propositions that would

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[1] अर्थ इति द्रव्यगुणकर्मसु । V. S. VIII, 2, 3.

[2] Several Mss. of *Praśastapâda's* Bhâshya end with the colophon इति प्रशस्तपादविरचितं द्रव्यादिषट्पदार्थभाष्यं समाप्तम्.

[3] V. S. I. 1, 4.

have sufficed for half a dozen *Sûtras*. Besides it is very awkwardly worded if not positively ungrammatical. A comparison of this aphorism with the opening passage of *Praśastapâda's* scholium leaves hardly any doubt about its spuriousness. *Praśastapâda's* passage runs thus :— द्रव्यगुणकर्मसामान्यविशेषसमवायानां षण्णां पदार्थानां साधर्म्यवैधर्म्यतत्त्वज्ञानं निःश्रेयसहेतुः । तच्चेश्वरचोदनामित्युक्ताद्धर्मादेव ॥[1]

Now one of these two passages must be an adaptation of the other. According to *Kiranâvali*, this passage of *Praśastapâda* explains only the first three *sûtras* of *Kaṇâda*, which implies that the fourth *Sûtra* quoted above was unknown to the scholiast. Hence if *Kiraṇâvali* is to be believed, the aphorism must be the later of the two. *Śrîdhara*, the author of *Nyâya-Kandali*, speaks to the same effect. In introducing the last sentence he says that it was added to remove any apparent inconsistency between the preceding sentence and *Kaṇâda's* second aphorism यतोऽभ्युदयनिःश्रेयससिद्धिः स धर्मः । The inconsistency is that while according to the scholiast knowledge of categories is the means of निःश्रेयस, *Kaṇâda* speaks of it as resulting from धर्म; and this inconsistency is removed by the scholiast by adding that the knowledge of categories itself springs from धर्म as revealed in divine commandments. So according to *Śrîdhara* this last clause is an addition of the scholiast intended to remove the apparent inconsistency, and yet it is summed up in the opening words of the fourth *Sûtra*, धर्मविशेषप्रसूतात्. Either these words or the whole aphorism must therefore have been suggested by *Praśastapâda's* passage. If the aphorism, as it stands now, had existed before, there would have been no सूत्रविरोध, and therefore no necessity for *Praśastapâda's* additional clause तच्चेश्वरचोदनाभिव्यक्ताद्धर्मादेव. We must, therefore, suppose that the aphorism was added by some later writer in order to supply what appeared to him an oversight of *Kaṇâda*. Besides, the fact that there should have been even the suspicion of a contradiction between the enumeration of six categories and *Kaṇâda's* second *sûtra* proves that the six

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[1] P. B. Ben. ed. pp. 6, 7.

categories were not thought of by *Kanâda* and were for the first time mentioned by his scholiast, *Praśastapâda*. We must, therefore, construe the aphorism अर्थ इति द्रव्यगुणकर्मसु[1] as implying that *Kanâda* mentioned only three categories to which the scholiast added three more, while the seventh was added still later.[2] If any doubt is felt on the point, a critical examination of the aphorisms which are supposed to define सामान्य and विशेष will dispel it. These aphorisms speak of विशेष as well as of सामान्य in a way quite different from the later conceptions of the two categories. Aphorisms सामान्यं विशेष इति बुद्ध्यपेक्षम् and अन्यत्रान्त्येभ्यो विशेषेभ्यः are especially significant. The first shows that *Kaṇâda* used the word विशेष as a relative term opposed to सामान्य, meaning that the notions of *genus* and *differentia* are always relative, and that the same property may be a *genus* with respect to one class, and a *differentia* with respect to another class of things. घटत्व, for instance, is a *genus* as including all jars under one class, and a *differentia* as distinguishing all jars from other substances, as cloth and men. The second aphorism shows that *Kanâda* distinguishes *ultimate differences* of things from other *differentiae* by giving to the former the special name of अन्त्यविशेष. It is these *ultimate differences* that are denoted by the later *Vaiśeshikas* by the category विशेष ; and the fact that *Kaṇâda* regards them only as one species of *differentia* shows that he did not include them in a separate category having absolute and not merely a relative existence. The conclusion is irresistible that the अन्त्यविशेषs, which were at first only one kind of *differentia*, were afterwards developed into an independent category. The notions of सामान्य and समवाय can also be shown to have originated in the same way.[3]

It will be thus seen that unlike *Nyâya*, *Vaiśeshika* was never given out to the world as a cut and dry system. It was gradually evolved as the ever-flowing stream of controversy

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[1] V. S. VIII. 2. 3. [2] V. S. I. 2. 3-6.

[3] Similarly while *Kanâda* mentions only 17 qualities, the scholiast adds seven more, गुरुत्व and others, making in all 24, which number has been accepted by all later writers.

suggested new points or disclosed the faults of old ones.' *Praśastapâda* thus occupies a somewhat intermediate position between *Kaṇâda* and his later commentators. He is sufficiently removed in time from *Kaṇâda* to call him a *muni* and a desciple of *Maheśvara*,[1] while he himself is regarded almost as a semi-mythical personage by later writers. His age cannot, however, be ascertained even approximately. The earliest known commentary on *Praśastapâda's* work is that of *Śrîdhara* who gives his own date as 991 A. D. He must also have preceded *Śankarâchârya* who seems to quote from him several times. The opinions ascribed by *Śankarâchârya* to the *Kâṇâda* school are all found in *Praśastapâda's* work.[2] *Śrîcharaṇa*, in his commentary on *Śârîraka-Bhâshya* called *Prakatârtha*, says that a particular view criticised by *Śankara* belongs to the older school of *Vaiśeshikas* though opposed to that contained in *Râvaṇa's* *Bhâshya*. The view referred to is propounded by *Praśastapâda* who must, therefore, be older than *Râvaṇa*.[3] This *Bhâshya* of *Râvaṇa* which may be a commentary either on *Kaṇâda's Sûtras* or *Praśastapâda's* own work, is not available, nor is its date known. *Udayana's* *Kiraṇâvali* is, however, said to have been based upon it.[4] If this *Râvaṇa* is the same as the reputed author of a commentary on *Ṛigveda* he appears to have been a very ancient author, and *Praśastapâda* must be still older. Moreover, if *Praśastapâda* was as suggested above the first to enumerate the six categories, he must have preceded *Vâtsyâyana* who mentions them.[5] Nothing more definite can be said on the point for the present, and we must, therefore, leave *Praśastapâda's* date too as one of the uncertainties of Indian chronology.[6]

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[1] P. B. Ben. ed. pp. 1 and 329.

[2] Cf. the passages in *Śârîraka-Bhâshya* (Anandashram ed. pp. 514-5 and p 519 with the passages in P.B.Ben ed. p. 48 and p. 328 respectively

[3] Praśatapâda has also been referred to as प्रशस्तचरण, प्रशस्तकर and प्रशस्तदेव and some even identify him with Gotama See *Vindhyeśvarîprasâda's Intro.* to *Vaiśeshika Darśana* (Bibl. Ind. ed.)

[4] P. B. Ben ed. Intro. p. 12 note. [5] *Vât.* on G. S. I, 1, 9.

[6] If *Charaka*, the writer on medicine, is correctly identified with Patañjali, Prasastapâda must be anterior to him. See p. XXXI *supra*

. The age of commentaries proper begins with *Vâtsyâyana*, otherwise known as *Pakshila-Svâmin*, whose commentary on *Gotama's* work is the oldest known work of the kind we now possess.[1] *Vâtsyâyana* must have lived about the end of 5th century A. D. for he preceded the well-known Buddhist teacher *Dinnâga* who is said to have lived in the early part of the 6th century.[2] *Diṅnâga* was succeeded by the celebrated author of *Udyota* who is mentioned by *Subandhu* writing in the 7th century.[3] *Udyotakâra* is said to have written his work to dispel the errors of *Diṅnâga* and others, and *Vâchaspati* in his *Ṭîkâ* adds that his principal object was to defend *Vâtsyâyana* against the attacks of *Diṅnâga*.[4]

According to the Jain *Śloka-Vârtika*, *Udyotakâra* was in his turn answered by *Dharmakîrti*.[5] Now *Dharmakîrti* is known to have lived in the first half of the 7th century[6]

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[1] Was *Vâtsyâyana* a Buddhist? Some have supposed him to be so because his work does not begin with a prayer to any of the Hindu deities. But the epithet Svâmin as well the fact that the Buddhist writer *Dinnâga* controverts his views should leave no doubt about his orthodoxy. He was also called Dramila (Dravida ?) or Pakshilasvâmin. He was a native of Conjeeveram and lived about A. D. 400 i. e. a century before Dinnâga and Vasubandhu. See S. C. Vidyabhushana's *Indian Logic, Mediæval School*, pp. 68–72.

[2] Max Müller : *India, What can it teach us* ? Ist ed. p. 320. Dinnâga is said to have introduced the universal proposition व्याप्ति into the Indian syllogism for the first time.

[3] *Vâsavadattâ* (Calc. ed. p. 235) has न्यायस्थितिमिवोद्योतकरस्वरूपाम् । See also Dr. Hall's Preface to his edition of that work. Udyotakâra was called Bhâradvâja and lived at Thaneswar near Delhi. He was a preceptor of the Pâs'upata sect.

[4] See quotation at P. B. Ben. ed. Intro. p. 10. *Udyotakâra* himself says :—

यदक्षपादः प्रवरो मुनीनां शमाय शास्त्रं जगतो जगाद ।
कुतार्किकाज्ञाननिवृत्तिहेतुः करिष्यते तस्य मया निबन्धः ॥

Also see Weber, *Zeitschr. D. M. G.* XXII. 727, and Colebrooke *Miscellaneous Essays* Vol. I p. 282, Cowell's note.

[5] J. B. B. R. A. S. Vol. XVIII p. 229.

[6] Ibid. p. 90. Dr. Satischandra Vidyabhushana thinks that *Dharmakîrti* and *Udyotakâra* were contemporaries and flourished about 633 A. D. See *Indian Logic, Mediæval school.* p. 105 and Bhandarkar Memorial Volume p. 164.

Diṅnâga and *Udyotakâra* therefore must have belonged to the 6th, and *Vâtsyâyana* at the latest to the end of the 5th century. *Vâtsyâyana* is not, however, the earliest scholiast on *Gotama's Sûtras*. The alternative interpretations of G. S. I. 1, 5 given by him show that the traditional meaning was obscured at his time, and that several writers before him had interpreted the *Sûtras* in different ways. The interval between *Gôtama* and *Vâtsyâyana* is considerable and could not have passed without producing some notable writers; yet no relics of the period appear to have been left behind. Either the Scythian inroads which ravaged the country from the 1st century B. C. to the 4th century A. D. must have swept away all literary records of the period, or some unknown cause must have lulled philosophical activity for the time.

After *Udyotakâra* there seems to have occurred another long gap in the succession of orthodox *Nyâya* writers until the end of 10th century, when a revival took place under the influence of the author of न्यायकन्दली which is the earliest known commentary on *Praśastapâda's Bhâshya*. *Śrîdhara* wrote at least three other works named अद्वयसिद्धि, तत्त्वबोध, and तत्त्वसंवादिनी. The absence of any eminent *Nyâya* or *Vaiśeshika* writer between *Udyotakâra* and *Śrîdhara* makes it highly probable that the tradition was broken in the interval. This interregnum so to say is the more inexplicable as the period was one of intense intellectual activity. Controversies between the Brahmins as represented by the *Mîmâṁsakas* and *Vedântins* on the one hand and the Buddhists and the Jainas on the other occupy almost the whole of this period; and it is strange that the followers of *Gotama* and *Kaṇâda* did not freely enter into the fray. *Vâtsyâyana* and *Udyotakâra* set the ball of controversy rolling, but no *Nyâya* or *Vaiśeshika* writer seems to have taken up the cudgels on their behalf immediately after *Dharmakîrti's* strictures. The task of answering the great Buddhistic writer was left to *Mîmâṁsakas* like *Kumârila*, *S'aṅkarâchârya* and *Maṇḍana*, who were by no means favourable either to the *Nyâya* or to the *Vaiśeshika* systems. *Dharmottara* defended *Dharmakîrti* against the criticisms of *Kumârila* and *Maṇḍana*, and we again

find *Śrîdhara* a *Naiyâyika* answering *Dharmottara*. Though the *Nyâya* and *Vaiśeshika* systems had thus no spokesman of their own during this interregnum, the individual doctrines inculcated by them were not a bit neglected. They were fully handled by the rival disputants as if they had by that time become the common property of all schools. The *Mîmâṁsakas* strongly controverted the doctrine of non-eternity of sound, and the *Vedântins* criticized the atomic theory. The *Prâbhâkaras* started novel views about *Samavâya*, while all the schools fought over the proper number and nature of proofs. The answer to these criticisms came partly from the Buddhists and the Jainas and partly from the later *Nyâya* writers. The fact seems to be that at this time the *Nyâya* and more and more the *Vaiśeshika* doctrines, despite smaller differences, found their strongest supporters among the Buddhists and the Jainas, many of whose tenets closely resembled the peculiar doctrines of the *Vaiśeshikas*. The *Nyâya-Bindu*, for instance, which can now be safely ascribed to *Dharmakîrti*,[1] is a purely *Vaiśeshika* treatise while the *Pramâna-Samuchchaya* of *Dinnâga* and *Dharmakîrti's Vârtikas* on it must also have been largely indebted to previous *Vaiśeshika* works. This must also be the reason why *Vaiśeshikas* were at this time looked upon almost as heretics.[2]

The alliance of the *Vaiśeshikas* with the Buddhists and the evident tendency of many of their theories towards atheism and materialism alarmed the orthodox writers of the *Mîmâṁsâ* and *Vedânta* schools who at once consigned them to the purgatory of non-believers. *Śaṅkarâchârya* calls them *Ardha-Vainâśikas* (Semi-Buddhists), while *Kumârila* brackets them with *Śâkyas* as heretics who are frightened

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[1] J. B. B. R. A. S. Vol. xxx p. 47. and S. C. Vidyabhushana's *Indian Logic. Mediæval School* p. 109.

[2] For a detailed account of Jaina and Buddhistic Logicians, see Dr. Satischandra Vidyabhushana's *Indian Logic, Mediæval School* and for Chinese and Japanese writers see Suguira's *Hindu Philosophy as preserved in China and Japan.*

out of their wits by the advent of the faithful *Mîmânsakas*. And yet a glance at *Praśastapâda's Bhâshya* will show that the *Vaiśeshikas* were at least as orthodox and as decidedly anti-Buddhistic as either the *Mîmâmsakas* or the *Vedântins*. *Praśastapâda* begins, with a prayer to God and concludes by ascribing the origin of the world as well as of the *Vaiśeshika* system to Maheśvara. He accepts the authority of *Śruti* and occasionally controverts the views of the Buddhists. The notion of *Vaiśeshikas* being heretical probably originated in the din of controversy between the Buddhists and the *Mîmâmsakas*, and the prejudice thus created stuck to them for a long time afterwards. The system of *Nyâya*, however, seems to have escaped the stigma of heresy, probably owing to its comparative neglect in this period. The controversies of this period mainly raged round metaphysical and theological questions which were monopolized by the *Vaiśeshika*, while the purely logical part of *Gotama's* system did not provoke much opposition. Only one doctrine of the *Naiyâyikas* was made the subject of controversy, namely the theory of a personal Creator of the universe. This doctrine was strongly advocated by the sect of *Pâśupatas*, and various sub-sections of *Bhâgavatas*. These theistic Schools probably derived their inspiration from *Gotama's* work, but they very soon became distinct religious sects.[1] On the whole it appears that, although there is a lack of special *Nyâya* or *Vaiśeshika* works in this period, the various doctrines laid down by *Gotama* and *Kaṇâda* were fully threshed out and underwent additions and alterations which were not even dreamt of by previous writers.

The interregnum from *Udyotakâra's* time to the end of the 10th century may have been produced by various causes which cannot be known at present ; nor can we say for certain how the subsequent revival was brought about. Perhaps learned men at this time were too much occupied with religious and sectarian disputes to attend to the drier subtleties of logic. The fact however, cannot be denied, for while none of the known works of *Nyâya* or *Vaiśeshika* proper can be

[1] Max Müller : History of Ancient Sanskrit Literature p. 48.

assigned to the interval between the 7th and the 10th centuries, the succeeding age is marked by such an inrush of *Nyâya* and *Vaiseshika* writers as more than atoned for the inactivity of the previous period. The most notable productions of this later age are a series of commentaries on the works of *Prasastapâda* and *Vâtsyâyana* who had then come to be looked upon as ancient authorities to be explained and enlarged with reverence, rather than criticized or corrected by abler successors. In this later period boldness and originality of thought dwindle in proportion to an increase of scholastic subtlety. The range of topics is limited, but each is treated with a greater fullness and ingenuity. There is a distinct tendency towards scholasticism, which afterwards assumed such abnormal proportions in the Nuddea school, but the change was not completed till four centuries later. It may be described as an age of transition from the genuine philosophy of mediæval India to the scholastic verbiage of modern times; and it is a striking fact that this age nearly coincides with the growth of scholasticism in mediæval Europe. It is not a little remarkable that the history of Indian logic bears in this respect a close analogy to the progress of thought in Europe. If *Gotama* lived about the same time as Aristotle, *Vâtsyâyana* was probably the contemporary of Boethius and the Revivalists; while the modern *Âchâryas*, such as *Śrîdhara*, *Vâchaspati* and *Udayana* flourished in the same age which produced Thomas Aquinas and Duns Scotus in the West. Are we then to suppose that human mind in India as well as in Europe passed successively through the same phases of philosophic development and nearly at the same rate of progress? The question is difficult to answer, but the coincidences are none the less interesting.

The first writer of this age of revival was *Śrîdhara* who wrote his *Nyâya-Kandali* in 991 A. D.[1] *Śrîdhara*

[1] See P. B. Ben. ed. p. 331. The colophon contains the line, त्र्यधिकदशोत्तरनवशतशाकाब्दे न्यायकन्दली रचिता। which gives Śaké 913 i. e. 991 A. D. as the date of the composition of the work. Bhandarkar (Report on Search of SK. Mss. for 1883-4 p. 314) reads the line as अधिकदशोत्तर, which gives the date Śaké 910 or 988 A. D., but this must be a mistake, for the word अधिक is inexplicable without त्रि.

takes great pains to refute the opinions of *Kumârila* and *Sureśvara* alias *Mandana* on the one hand as well as *Dharmottara* on the other, a fact which seems to show that *Śrîdhara* was the first eminent *Nyâya* writer after them. Rajaśekhara, a Jain commentator on *Nyâya-Kandali*[1] mentions three other commentaries on *Praśastapâda's Bhâshya*, besides *Śrîdhara's* work, *viz.*, the *Vyômavatî* of *Śivâchârya* the *Kiraṇâvalî* of *Udayana* and the *Lîlâvatî* of *Śri Vatsa* or *Vallabha*, all of which were written after *Śrîdhara's* work but before the end of the 13th century. The chronological order of these writers may be fixed as *Śrîdhara*, *Vallabha*, *Udayana*, and *Śivâditya*. All of them came to be looked upon as eminent authorities and honoured with the title of *Âchârya*. Each of them was distinguished for some new conception, or original treatment of old topics. The works of *Vallabha* and *Śivâditya* are not yet available so as to enable us to form any definite opinion about them, but their views are frequently quoted and criticized in later works. *Udayana's Kiraṇâvalî* was probably left unfinished by the author, as all the Mss. hitherto available contain only the chapters on द्रव्य and गुण.[2] *Śrîdhara* lived as stated above at the end of the tenth century. He was followed by *Vâchaspati Miśra* in the 11th century, who wrote commentaries on all the principal philosophical systems, and whose works have been deservedly held in the highest estimation by the succeeding generations.[3] *Vâchaspati*, the author of *Bhâmatî* and *Sâṅkhya-Tattva-Kaumudî*, wrote an equally able commentary on the *Vârtikas* of *Udyotakâra*, called *Vârtika-Tâtparya-Ṭîkâ* and this *Ṭîkâ* of *Vâchaspati* became the text of another commentary, *Tâtparya-Pariśuddhi* by *Udayana*.[4]

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[1] P. B. Ben. ed. Intro. p. 19.

[2] See the opening passage of *Tarka-Dîpikâ*—p. 1, and Note thereon, p. 72 infra.

[3] J. B. B. R. A. S. Vol. XVIII. p. 90. Cowell in the preface to his translation of *Kusumâñjali* tries to prove that *Vâchaspati* lived in the 10th century ; but his view cannot be accepted as *Vâchaspati* quotes राजवार्तिक of King Bhoja who reigned in A. D. 993 Satischandra Vidyabhushana also places *Vâchaspati* in 976 A. D. when he is said to have composed his *Nyâya-sûchi-nibandha*.

[4] Bhandarkar : *Report on Search of Sk. MSS. for* 1883-4, p. 81.

Udayanâchârya, the author of *Kiranavalî* and *Pariśuddhi* lived, therefore, some time after *Vâchaspati*, and may be assigned to the end of the 12th century.[1] *Udayana* is the greatest *Naiyâyika* writer of this age. He combines in himself the two-fold character of an eminent dialectician and a religious revivalist, and has consequently become the centre of a number of traditions which have perhaps little foundation in fact. A story, for instance, is told of his having once made a pilgrimage to the temple of Jagannath, where he found the temple-door shut against him. On this the irate *Naiyâyika* addressed the following couplet to the Deity :—

ऐश्वर्यमदमत्तोऽसि मामवज्ञाय वर्तसे ।
उपस्थितेषु बौद्धेषु मदधीना तव स्थितिः ॥[2]

"Infatuated with omnipotence as thou art, thou treatest me with contempt; but (remember) when the heretics approach, thy very existence depends upon me."

This irreverent apostrophe was probably founded on the fact that *Udayana* wrote two well-known treatises to prove the existence of God and to refute the atheistical objections of the *Bauddhas* and other heretics. These treatises respectively known as *Kusumâñjalî* and *Bauddha-dhikkâra*, though small, prove *Udayana* to be a very acute and powerful writer. *Udayana* is said to have carried on a vigorous crusade against the *Bauddhas* and the *Jainas*; and if Monier Williams is right in assigning the complete decay of Buddhism in India to the beginning of the thirteenth century,[3] *Udayana* must have taken a leading part in giving the death-blow. At any rate the great prominence given in all the later works to ईश्वरकारणवाद or the doctrine of a personal Creator of the Universe may be ascribed to *Udayana's* influence. It is

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[1] Cowell's Preface to his translation of *Kusumâñjali*, p x , J. B. B. R. A. S. Vol. XVIII p. 89-90. Dr. S. C. Vidyâbhushana places him about 984 A. D. on the authority of a verse in his *Lakshanâvali*. Vide *Bhandarkar Memorial Volume* p. 165.

[2] Nehemiah Gore's *Rational Refutation of Hindu philosophy* translated by F. Hall, p. 6, note. [3] Monier Williams : *Buddhism*, p. 170.

highly probable that *Udayana's* works gave a strong impetus to the *Śaiva*, *Vaishṇava* and other theistic sects which arose in large numbers at this time. *Naiyâyikas* amongst all the Indian systematists were from henceforward the strongest supporters of monotheism, and the Nuddea School in later times produced one of the greatest leaders of a modern theistic movement, *viz.*, *Chaitanya* of Bengal.

Tradition ascribes to *Udayana* the first conception of the idea of uniting the two sister systems of *Nyâya* and *Vaiśeshika* into one harmonious whole. *Udayana's* extant works do not however support this theory, although it is not improbable that he threw out hints to that effect, which led some later writer to make the experiment. The earliest known work in which the two systems are found actually combined, as in many later works, is the *Sapta-Padârthî* of *Śivâditya Miśra*,[1] and it is possible that he was the first to put the idea into practice. *Śivâditya* is also the first writer to mention *Abhâva* as the seventh category and to introduce a systematic discussion of logical questions under लक्षण. *Sapta-Padârthî* may, therefore, be regarded as the model of all such later manuals as *Tarka-Saṅgraha*, *Tarka-Kaumudî* and *Tarkâmrita*.

As to *Vallabhâchârya* his exact date is uncertain, but he appears to have preceded the author of *Sapta-Padârthî* if not also *Udayana*. This seems probable from the mention of *Nyâya-Lîlâvatî* in a Canarese poem named *Darśana-sâra* written by a contemporary poet in praise of King *Siṅghana* of the Yâdava dynasty of Devagiri, who reigned from A. D. 1210 to 1247.[2] *Darśana-sâra* also mentions *Udayana*

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[1] A MS. of Jinavardhana's commentary on *Sapta Padârthî* is in the Deccan College Library This Jinavardhana lived in *Samvat* 1471. Peterson mentions a MS. of सप्तपदार्थीवृत्ति named मितभाषिणी by *Mâdhava-Saraswati*, as dated Samvat 1405. See Report of the Search of Sanskrit MSS. for 1896 p. 24. Also Bhandarkar's Report for 1882-83 p. 25. Prof. Ghate mentions a third Commentary पदार्थचन्द्रिका by Sesânanta. Prof. Ghate places Udayana in 984 A. D. and Ganges'a in the 11the Century, and S'ivâditya between the two. J. B. B. R. A. Society XXIII p. 34.

[2] Bhandarkar: *Early History of the Dekkhan*, p. 82.

and some other writers.;[1] but nothing further can be said about it until the work is available to the public. It is superfluous perhaps to remark that this *Vallabha*, the author of *Nyâya-Lîlâvatî* was quite a different personage from the great Vaishnavaite reformer of that name who flourished in the 15th century.[2]

A host of smaller writers such as *Varadarâja* and *Mallinâtha* may be mentioned as belonging to this second period, but they do not seem to have left any lasting mark on subsequent literature. The period may be roughly said to have closed about the beginning of the 14th century. It is marked by a great activity in the beginning and at the end, with an intervening blank which lasted for about 3 centuries and which sharply divides the older from the later school of writers. The conflict of opinions between the *Vaiśeshikas* and the *Naiyâyikas* as well as the differences between the ancient and the modern schools of *Naiyâyikas*, which are so frequently discussed in modern works, seem to have originated in this period; and it was perhaps the growth of these minute differences that created at the end of this period a reaction in favour of amalgamating the two systems. This attempt at amalgamation, however, produced an effect exactly contrary to what was intended, for it stereotyped the differences instead of removing them. We find that in this period almost all the principal doctrines were evolved and the details were worked out, on which the dialecticians of the third period were exclusively to spend their scholastic ingenuity and produce volumes after volumes without making any real progress. With *Udayana* and *Śivâditya* we lose sight of writers who deserve

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I am indebted for this information to my friend Mr. K. B. Pathak formerly of the Deccan College. He saw a Canarese Ms. of दर्शनसार in the library of Brahma-Sûri Śâstri of Śravana Belgole in Mysore territory. It is not known when the book was written, but the author appears to have been a contemporary of सिद्धपण.

[2] Another writer Jayanta wrote *Nyâya-mañjarî* an indepedent Commentary on Nyâya-Sûtras. He was a native of Kashmir and lived in the 11th century. He quotes Vâchaspati and refutes Buddhists.

to be called *Âchâryas*, as having aimed at originality and written epoch-making books. The class of *Âchâryas* or masters, was henceforward to give place to that of mere *Upâdhyâyas* or ordinary pundits. The race of giants was to be succeeded by a remarkably versatile and disputatious troop of dwarfs. Philosophy lost its freshness as well as its charm, and gradually degenerated into a bundle of endless controversies.

The end of the 14th century saw the commencement of the third period of *Nyâya* literature ; and *Gangeśa*, or *Gangeśopâdhyâya*, the author of *Tattva-Chintâmaṇi* may be said to be its oracle. He founded a new school of text-writers and commentators who afterwards came to be known as the Nuddea school owing to their having chiefly flourished in the tols of Nuddea or Navadwipa in Lower Bengal. The distinguishing features of the writers of the school were their overwhelming pride, an abnormal development of the critical faculty, and a total disinclination to go out of narrow grooves of traditional doctrines. The original *Sûtras* and the scholia on them recede into background, while *Gangeśa's* work itself becomes the centre of a mass of literature unparalleled in any other country or age. Here we see at one and the same time scholasticism at its climax and true philosophy at its lowest depth. We might wade through volumes of controversial jargon without coming across a single flash of deep thought or real insight into the nature of things. Mere conventionalities and distinctions without a difference are the weapons in this wordy warfare, with which one disputant tries to defend his thesis or to vanquish a rival. It may be doubted if either the writer or the reader is made a whit the wiser by all this labour.

All the writers of this school are not however equally faulty in this respect. The earlier ones especially show a considerable freedom of thought which is quite refreshing. The most notable of this kind is *Gangeśopâdhyâya*, the founder of the Nuddea school, whose exact date is not known, but who probably lived about the end of the 14th century. *Gangeśa* quotes *Vâchaspati*, while his son *Vardha-*

mâna wrote commentaries on *Udayana's Kiranâvali* and *Vallabha's Lîlâvatî*. *Gangeśa* must have therefore lived after the 12th century. *Gangeśa* was followed by two writers of note *Jayadeva* and *Vâsudeva*. According to Burnell *Jayadeva*, otherwise known as *Pakshadhara Miśra*, wrote his *Manyâloka*, a commentary on *Gangeśa's Tattva-Chintâmani* about 5 centuries ago, that is, about the middle of the 14th century, but this is highly improbable.[4] *Vâsudeva Sârvabhauma*, a fellow student of *Jayadeva* and the author of a commentary on *Gangeśa's* work, had four pupils of whom the first *Gaurânga*, popularly known as *Chaitanya*, the celebrated religious reformer in Bengal, was born about 1485 A. D.[2] Both *Sârvabhauma* and *Jayadeva* must, therefore, have lived in the latter part of the 15th century, and *Gangeśa* at least a generation or two earlier. *Jayadeva* is said to have studied *Tattva-Chintâmani* with his uncle *Harimiśra*, which shows that *Gaṅgeśa's* work was already a standard book in the first half of the 15th century. We shall not be wrong therefore in placing *Gaṅgeśa* in the latter part of the 14th century at the latest.[3]

Vâsudev Sârvabhauma must have been a remarkable man, for all of his pupils distinguished themselves in dif-

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[1] Burnell, Catalogue of Tanjor MSS. Vol II., p 117. *Jayadeva* was noted for his intellectual powers. He got the nickname पक्षधर for having mastered a difficult book in a fortnight. He is probably the same as the author of प्रसन्नराघव but is different from the poet who composed गीतगोविंद. Raghunâtha Śiromani is said to have been his pupil for some time.

[2] Cowell (Colebrook's *Miscellaneous Essays*, Vol. I., p. 281) gives the date of Chaitanya's birth as 1489; but see Bose's *History of Hindu Civilization*. Vol. I. p 43. Chaitanya died in A. D. 1527. Vindhyesvariprasad quotes a verse current among Nuddea Pundits शाके मुनिव्योमयुगेन्दुगण्ये पुण्ये तिथौ फाल्गुनपौर्णमास्याम्। त्रैलोक्यभाग्योदयपुण्यकीर्तिर्देवः शचीनन्दन आविरासीत् । Here the word युग may mean two or four and so will give either Śaka 1207 and 1407 as the date of Gouranga's birth See Intro. to *Vais'eshika Dars'ana* (*Bibl. Ind. ed.*) p. 32.

[3] Prof. Ghate places *Gangeśa* in the 11th century on the authority of a Ms. of *Jayadeva's Âloka* transcribed in Lakshmaṇa *Samvat* 159 corresponding to A. D. 1267 See J. B. B. R. A. S. XXIII p. 93 and Vindhyeśvariprasad's Intro. to *Vaiśeshika Darśana* (*Bibl. Ind.*). *p*. 32.

ferent fields. The first, *Chaitanya,* founded a *Vaishṇava* sect which soon spread over the whole province of Bengal and revolutionized as it were the religious life of the people. The fact is noteworthy that the greatest exponent of the doctrine of faith in modern times received his early training in the dialectics of *Nyâya* philosophy. The devout mind of *Chaitanya* must have no doubt recoiled from the scholastic subtleties of *Gangeśa,* but they could not have failed to influence many of his views. *Vâsudeva's* second pupil *Raghunâtha,* otherwise known as *Tarka-Śiromaṇi* or simple *Śiromaṇi,* wrote *Dîdhiti,* the best commentary on *Gaṅgeśa's Tattva-Chintâmaṇi,* and is acknowledged to be the highest authority among the modern *Naiyâyikas.* The third was *Raghunandana,* the lawyer and the author of a commentary on *Jîmûta-vâhana's Dâya-vibhâga,* and is now held to be the best current authority on the Bengal School of Hindu law. The fourth *Kṛishṇânanda,* also wrote works on charms and other kindred subjects. All these writers being contemporaries of *Chaitanya* must have flourished in the beginning of the 16th century. *Raghunâtha Śiromaṇi* wrote besides *Dîdhiti* commentaries on *Udayana's* works and a few other treatises, one of which is *Padârtha-Khaṇḍana* or a refutation of *Vaiśeshika* categories. He was succeeded by a series of commentators whose sole ambition seems to have been to make the *Dîdhiti* as unintelligible and terrible to the student as possible. *Raghunâtha's* immediate successors were *Mathurânâtha, Harirâma Tarkâlaṅkâra* and *Jagadîśa,* who were followed by their respective pupils, *Raghudeva* and *Gadâdhara.* *Gadâdhara* may be called the prince of Indian schoolmen, and in him the modern *Nyâya* dialectics reached its climax.[1] He was such a thoroughgoing *Naiyâyika* that when asked to think of the prime cause of the universe on his death-bed, instead of contemplating God he is said to have repeated the words पीलवः पीलवः पीलवः; (atoms, atoms, atoms) ! His sixty-four treatises or *Vâdas* as they are called on as many topics noticed in *Tattva-Chintâmaṇi* form a continuous commentary on *Śiromaṇi's Dîdhiti* and *Jayadeva's Âlôka* ; but several of them are not

[1] Bhimâchârya : *Nyâya-Kosha,* Intro. p. 6.

yet. available. *Gadâdhara* having come about two generations after *Raghunâtha* must be assigned to the end of the 16th or the beginning of the 17th century. He was thus nearly contemporaneous with Lord Bacon whose denunciations of scholasticism may be most appositely illustrated by extracts from *Gadâdhara's* writings. Akbar's was an augustan age in India, and scholars like *Gadâdhara* found a congenial atmosphere in the peaceful times of the great and enlightened Mogul; but Akbar's death put an end to all dreams of a revival of letters. The wars and anarchy of the next two centuries afforded little scope for the cultivation of philosophy, and we accordingly find that even scholastic *Nyâya* could not flourish after *Gadâdhara*.

The generation next after *Gadâdhara* is represented by two writers standing on a somewhat lower level but equally famous. These were *Śankara Miśra*, the author of *Upaskâra*, a commentary on *Kanâda's Sûtras*, and *Viśvanâtha* who wrote *Siddhânta-Muktâvali* and *Gotama-Sûtra-vritti* which is a commentary on *Gotama's* aphorisms. *Śankara Miśra* was a pupil of *Raghudeva*, the fellow student of *Gadâdhara*. There is some doubt as to the date of *Viśvanâtha*, but he most probably belonged to this age.[1]

It is remarkable that the *Sûtras* of both *Kaṇâda* and *Gotama* should have attracted the attention of commentators at about the same time. *Śankara-Miśra* and *Viśvanâtha* who respectively commented upon the works of *Kaṇâda* and *Gotama* greatly resembled each other and were probably contemporaries. A kind of reaction against the excesses of *Gadâdhara* seems to have led these writers to seek the fresher fountains of the *Sûtras*. Another sign of this reaction was the production of manuals adapted to the understanding of the beginners and explaining the latest ideas in the simplest language. The *Bhâshâ-Parichchheda*, the *Tarka-Saṅgraha* and the *Tarkâmrita* are instances of this class of books, which must have come as a relief to those students of *Nyâya*

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[1] Rudrabhaṭṭa, brother of Viśvanâtha, wrote a commentary on Raghunâtha's *Dîdhiti*, called *Raudrî*. Mss. of two of Rudrabhaṭṭa's works are mentioned by Aufrecht (Catalogus Catalogorum) as dated 1640 and 1657 respectively.

who were hitherto lost in the mazes of *Pañcha-Lakshaṇî* and *Daśa-Lakshaṇî*. In course of time these manuals too were overloaded with commentaries, but fortunately the commentaries on them, except perhaps two, never became as popular as the originals. The two exceptions are *Viśvanâtha's Siddhânta-Muktâvalî* and *Annambhaṭṭa's Tarka-Dîpikâ* which being written by the authors of the original works are more like larger editions of those texts than mere explanatory glosses. These manuals proved very handy and useful to students, but they also marked the lowest watermark of the *Nyâya* and *Vaiśeshika* systems. Henceforward all originality was dead and the writers chiefly aimed at explaining the ideas of their predecessors instead of expounding their own. The *Upâdhyâyas* were now succeeded by writers whose high sounding names were in strange contrast with the worth of their productions. *Kroḍas* or annotations became plentiful, but original thinking was dead and gone completely. Even these are now rare, and the once famous class of *Naiyâyikas* is in danger of being extinct for ever.

The preceding rèsumê of the *Nyâya* and *Vaiśeshika* literature brings out, it is hoped, at least the one fact that that literature is as capable of a historical treatment as any other class of writings. It is the story of a gradual development of two philosophical systems which, springing out of a few elementary notions, attained their present proportions after many vicissitudes and in the course of several centuries. There must have been during this time considerable additions and alterations in the fundamental doctrines as conceived by the founders of the systems. The original nucleus was comparatively small, but the accretions and out-growths seem to have assumed in time quite large proportions. What an amount of earnest thought and labour must have been devoted to this work of elaborating complete systems out of a few primary principles ! It was a process of evolution brought about partly by the natural law of growth and partly by the mutual action and reaction of the several systems of Indian philosophy. In the beginning the chief rivals of the *Nyâya* and *Vaiśeshika* systems were the *Sâṅkhyas*, whose

theory of the anti-production reality of effects was diametrically opposed to the *Naiyâyika* doctrine of non-existent effect. Later they encounter the more formidable critics of the *Mîmâṁsâ* and *Vedânta* schools who differed from them in so many particulars that a severe conflict between the rivals was inevitable. The *Mîmâṁsakas* affirmed the eternity of sound, while the *Naiyâyikas* denied it. The first enumerated six proofs, the *Naiyâyikas* four, and the *Vaiśeshikas* only two. The *Naiyâyika* assumed a personal creator, the Vedantins an impersonal *Brahman*, while the *Mîmâṁsakas* would recognize nothing but the eternal Vedas. Again the Vedântins derived all creation from one universal spirit, the *Naiyâyikas* from hard minute atoms. The former were idealists *par excellence*, the latter out and out realists. The doctrines of the former always tended towards mysticism and idealism those of the latter towards materialism and disbelief. It was natural that systems so widely divergent should come into conflict with each other. The long-continued controversies between these rivals systematically influenced the tenets of all of them. While the Vedântins incorporated much of the logic of the *Naiyâyikas* into their works, the latter did not disdain to borrow many of the theological views of the former. It would be absurd therefore to expect that any of these systems as propounded in modern works would agree in all respects with the views of the ancient authors. The *Naiyâyikas* themselves recognize this fact by contrasting wherever necessary the views of the moderns with those of the ancients. It is also noteworthy that there is no sharp line dividing the ancient and the modern schools of *Naiyâyikas*. Sometimes the terms are applied to the *Vaiśeshikas* and *Naiyâyikas* respectively ; sometimes to older authors like *Vâtsyâyana* and *Praśastapâda*, as opposed to the later ones of the Nuddea school ; and occasionally even in that school to the author of *Dîdhiti* as dissenting from *Gaṅgeśa*. As an instance of the last, the student may compare the two definitions of करण one insisting upon the qualification व्यापारवत् and the other making proximity to the effect the sole test of causa-

tion.[1] The line dividing the ancients and the moderns has thus continuously moved forward and forward, thereby showing that the *Naiyâyikas* themselves acknowledged a progressive development of their philosophy. It ought to be an interesting study to mark the successive stages of this development, and discover the causes that may have led to them. The time may come when a deeper knowledge of the *Nyâya* and *Vaiśeshika* literature will enable us to solve this problem.

The foregoing observations have been mostly based on material obtainable from the literature of the *Nyâya* and *Vaiśeshika* systems themselves; but works belonging to other philosophical systems as well as the vast literary treasures produced in ancient and mediæval India will, if properly examined, yield still more important data for a history of Indian philosophy. A comparison of Greek logic with the logic of the *Nyâya* must also be very instructive. Such a comparison will not only show how similar ideas and modes of thought occurred almost simultaneously and in the same historical order to thinkers in two such distant countries as India and Greece, but it may also throw new light on some of the dark chapters in the history of Indian Logic. Space will not, however, permit me to enter into these interesting inquiries at present; and I must content myself with noting only one important fact which cannot be decently passed over in such a sketch as this. I, of course, refer to the striking resemblance which the syllogistic method of the *Nyâya* bears to the Pre-Aristotelian dialectics in Greece. Zeno the Eleatic was the founder of this latter, and Zeno must have been a contemporary of *Gotama*, or of at least some of his immediate predecessors.[2] Zeno's work, which is divided into three parts–upon consequences, upon the interrogatory method of disputation, and upon sophistical problems respectively–has many points of similarity with that of *Gotama*, while the interrogatory method, cultivated by Zeno's fol-

[1] For a discussion of these two views, see Notes on Sec. 37, pp. 186-90, *infra*.

[2] Whateley: *Elements of Logic*, p. 3.

lowers the sophists and brought to perfection in Plato's Dialogues, was almost identical with the syllogistic process of the *Naiyâyikas.* The essence of this method consisted in driving an opponent to a point where he was either totally silenced or the absurdity of his position became self-evident. So far as the *Naiyâyikas* were concerned this was not an accidental feature, for they have laid down a special rule that no premise in a syllogism can proceed without having a previous आकांक्षा or doubt, presumably started by an opponent in the controversy. Take the stock-example, "Mountain is fiery." "Why?" "Because it has smoke." "What then?" "Wherever there is smoke, etc.," and so on, every premise being a reply to some previous question, assumed until the imaginary querist has no more questions to ask. This is exactly the way Socrates used to argue with his real interrogators, or Euclid proved his theorems of geometry. Obviously this method is better suited for controversy than for purely didactic reasoning; and consequently we find that Indian thinkers who came after the *Naiyâyikas* such as the *Bauddhas* and the Vedântins modified it to a considerable extent just as Aristotle did in Greece.[1] The tripartite syllogism of Aristotle was nothing more than a re-adjustment of the ancient dialectical syllogism, although Aristotle himself made too much of it and expected from it results which it was incapable of producing. Similarly those who claim superiority for the Aristotelian over the five-membered syllogism of the *Naiyâyikas* forget that both are mere instruments or mechanical aids for thinking, and as such cannot by themselves furnish an absolute guarantee for truth. Both have their peculiar merits as well as draw-backs, and consequently both must be judged from their proper standpoints. Aristotle distinguished between the dialectic and the apodictic, *i. e.* the old and the new or his own syllogism by asserting that the former proceeded from mere belief or an assumed hypothesis while the latter was based on scientific

[1] Colebrooke thinks that the three-membered syllogism of the later Vedânta was borrowed from the Greeks, but this is mere guess See *Miscellaneous Essays*, Vol. I., p. 356.

truth. There is much force in this distinction, and it may to some extent apply to the five-membered syllogism also. But Aristotle's criticisms can no longer be accepted without reservation even with respect to doctrines intimately known to him. Much less can he be accepted as a safe guide in adjudging the merits of Indian logic.

It will not be proper to conclude this introductory sketch without noticing one more objection that is often advanced against the *Nyâya-Vaiśeshika* systems, namely that their heterogeneous character detracts considerably from their value as systems of pure logic. Indian logicians, say these objectors, have by their frequent digressions on metaphysical and other topics, such as the categories, the sources of knowledge and the theory of atoms, been led into treating the strictly logical questions either perfunctorily or in a wrong manner altogether. On a closer consideration however this heterogeneity of the *Nyâya* and *Vaiśeshika* systems will be found to have been inevitable. The narrow conception of logic as being only a theory and art of proof and nothing more is no longer tenable. Modern investigations, such as those of Kant Ueberweg and others, show that the purely logical questions are inseparably connected with others comprehended in the wider province of metaphysics. The best answer to the above objection can therefore be given in the words of an eminent modern writer:—

"Start as we may," says Prof. Adamson, "in popular current distinctions, no sooner do logical problems present themselves than it becomes apparent that, for adequate treatment of them, reference to the principles of ultimate philosophy is requisite; and logic, as the systematic handling of such problems, ceases to be an independent discipline and becomes a subordinate special branch of general philosophy."*

And again the same writer remarks:—

"Any criticism of a general conception of logic or special application thereof which does not rest upon criticism

* Prof. Adamson in his Art. *Logic* in *Encyclopaedia Britannica*, 9th ed. Vol. XIV p. 781.

of the theory of knowledge implied in it must be inept and useless. It will also have become apparent that a general classification of logical schools as opposed to the reference of these to ultimate distinctions of philosophical theory is impossible."*

The *Naiyâyikas* seem to have arrived at the same conclusion at an early period, and faced it boldly by embodying their views on all cognate and interdependent questions in a fairly consistent system. *Gotama* and *Kaṇâda* were not therefore such fools in mixing logical and metaphysical topics in their works as some of their modern critics would believe them to be. Logic is no longer regarded as a theory of proof only ; it is a theory of knowledge in general, and as such treats of many psychological and metaphysical topics which do not fall within the domain of the narrower science. Looked at from this standpoint *Gotama's* conception of his subject will be found to be remarkably accurate and just. Let us first understand him, and there will be then time enough to pick holes in his monumental work.†

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* See Encyclopaedia Britannica, 9th ed. Vol. XIV, p. 799.

† Max Müller in noticing my Brief Survey of Indian logic remarks that at p. 476 of his Six Systems of Indian Philosophy "But unfortunately that period in the historical development of the Nyâya which is of the greatest interest to ourselves, namely that which preceded the composition of the Nyâya-Sûtras, had by him (i. e. myself) also to be left a blank, for the simple reason that nothing is known of Nyâya before Gotama". It should be remembered however that Nyâya was recognised as a separate system only after Gotama and that all traces before him must be sought in the general philosophical literature such as the *Upanishads*.

Annambhaṭṭa and his works.

Annabhaṭṭa, the author of the *Tarka-Sangraha* and the *Dîpikâ*, shares the fate of many Sanskrit writers of being known only in his works. The name itself looks anomalous, and is either a contraction of *Ananta Bhaṭṭa* or a sanskritized form of the Canarese name *Aṇṇa Bhaṭṭa*. Little do we know about him, and that little mostly consists of traditions which cannot be accepted as true without the strongest corroboration. Mr. R. B. Godbole, in his 'Dictionary of Modern History of India'*, gives a detailed account of our author without however mentioning the source of his information. According to him, *Annambhaṭṭa* was a Tailang Brahman by birth and resided in a village named *Garikapâda* formerly in the possession of Nizam Ali. He lived in the 15th century at the time of the Chalukyas, studied *Nyâya* at *Kauṇḍinyapura* or Kondu Vidu for 12 years and became a famous *Naiyâyika*. He established a College for teaching *Nyâya* in his native town where he instructed his pupils in a graduated series of *Nyâya* works consisting of *Tarka-Saṅgraha*, *Tarka-Dîpikâ*, *Siddhânta-Muktâvalî* and *Gadâdharî*. He had many children none of whom survived him, and is said to have travelled out of his village only once in his life when he visited the shrine of Mallikarjuna at the advanced age of 55. From this it would appear that *Annambhaṭṭa* was posterior to both *Gadâdhara* and *Viśvanâtha*, which is very probable; but then he could not have lived in the 15th century as stated by Mr. Godbole. It has been shown elsewhere, † that *Gadâdhara* must have flourished in the latter part of the 16th century and *Viśvanâtha* one generation later. Obviously *Annambhaṭṭa* who taught the works of these writers could not have lived before the beginning of the 17th

* R. B. Godbole : भरतवंशाचा ऐतिहासिक कोष p. 10.

† See *Introduction* p. LIII *supra*.

century. Another of Mr. Godbole's statements, viz. that *Annambhaṭṭa* travelled only once in his life, is contradicted by a tradition embodied in a well-known couplet that has passed into a proverb, काशीगमनमात्रेण नान्नंभट्टायते द्विजः meaning that a man does not become a great scholar like *Annambhatta* simply by going to Benaras. If the verse refers to the author of the *Tarka-Saṅgraha*, he must have visited and studied at Benaras. The proverb would also show that he became famous for his learning at a very early period, a conclusion which is strengthened by the fact that his works became very popular and have been in use as elementary text-books in all parts of India. No reliance can therefore be placed on Mr. Godbole's account, and in the absence of any other authentic source of information we are left to such meagre data as are supplied by the writings of *Annambhaṭṭa* himself.

Apart from such vague traditions, we can unhesitatingly say that *Annambhaṭṭa* is comparatively a modern writer. He belonged to the class of manual writers, who mostly flourished after the 16th century and whose chief aim was to simplify the *Nyâya* and *Vaiseshika* systems by pruning all superfluous technicalities out of them, and bringing them within the comprehension of beginners. The *terminus a quo* of our author may for the present be fixed at about 1600 A. D., the time when *Gadâdhara* flourished. *Annambhaṭṭa* rarely refers to any previous writer or work that might enable us to fix his age accurately. He however notes the controversy about व्यापारवद् करण, first started by *Raghunâtha*, the author of *Dîdhiti**; while in another passage of the *Dîpikâ*, he seems to quote directly from the *Dîdhiti*, for the sentence प्रतियोगितावच्छेदकारोप्य° etc, which occurs at the bottom of p. 62 *infra* and which is misread in many Mss. of *Dîpikâ*, appears to have been taken from a corresponding passage in the *Dîdhiti*.† It has been shown elsewhere that *Raghunâtha Śirômaṇi* the author of *Dîdhiti* lived in the first quarter of the 16th century.‡ The *Dîdhiti* must have been written about 1520 A. D. and *Annambhaṭṭa* neces-

* Page LIII *supra*.

† See Note 5 under Sect 80 p. 371, *infra*.

‡ See *Introduction* p. LII *supra*.

sarily came after it. *Gadâdhara* came two generations after *Raghunâtha* with whose grand pupil *Raghudeva* he was contemporary. *Gadâdhara* therefore lived about the end of the 16th century, either in *Mithilâ* or Nuddea; and if it be true that *Annambhaṭṭa* taught his works in his own college in the far-off town of *Kauṇḍinya-pura*, some time must have elapsed between *Gadâdhara* and *Annambhatta* to allow the fame of the former's works to reach the Southernmost province of India. The story of *Annambhatta* teaching *Gadâdhara's* work in his College derives support from another tradition, according to which the *Tarka-Dîpikâ* was specially composed for the use of those who could not understand *Gadâdhara's* larger work, and came to be called बालगदाधरी on account of its being an epitome of the erudite commentary of the Great School-man. It may be therefore fairly presumed that *Annam-bhaṭṭa* lived some time after *Gadâdhara i. e.* after 1600 A. D. If *Viśvanâtha*, the author of the *Siddhânta-Muktâvalî* also preceded him, this *terminus* will have to be shifted still further. *Viśvanâtha* and his brother *Rudrabhaṭṭa*, who wrote a commentary on the *Dîdhiti*, lived most probably in the first quarter of the 17th century,* and *Annambhaṭṭa* could not have lived earlier.

The *terminus ad quod* of our author may be fixed at 1700 A. D. The *Tarka-Sangraha* must have become a standard work, and a difficult one also in the latter part of the 18th century, since *Śrikṛishṇa Dhûrjaṭi* wrote his commentary called *Śiddhânta-Chandrodaya* about that time for the instruction of *Râjasiṁha*, son of King *Gajasimha* who flourished in 1774 A. D. The *Tarka-Chandrikâ* by *Vaidya-nâtha Gadgil* seems to be an earlier commentary on the *Tarka-Saṅgraha*, for a Ms. of it in the Deccan College Library gives as the date of its composition, Śake 1644 *i. e.* 1722 A. D. This *Vaidyanâtha* is probably identical with *Tatsat Vaidyanâtha*, the pupil of *Nâgeśa* and the author of a commentary on his *Udyota*. *Nâgeśa Bhaṭṭa* is known to have been invited to a grand sacrifice in 1714 by *Savai Jayasiṁha*, and his pupil *Vaidyanâtha* may therefore

* See Introduction p. LIII. *supra*.

have written his commentaries in the next decade. Obviously *Annambhatta* must have lived before this time. The evidence of Mss. of the *Tarka-Saṅgraha* is conclusive on the point. Stein mentions a Ms. of T. S. dated 1740 A. D. and another of T. D. dated 1735 A. D.* The oldest known Ms. however of these two works is the one now in the possession of Dr. Jacobi of Bonn and marked J in the present edition. It is dated Śake 1634 *i. e.* 1712 A. D. As this Ms. contains several corrections and marginal additions, it will not be wrong to assume that the two works were written several years before they were copied. Hence we can safely place *Annambhaṭṭa* before the beginning of the 18th century. The period from A. D. 1625 to A. D. 1700 is neither too long nor too short to cover one lifetime, and if we can place *Annambhatta* between these two *termini* the result ought to be regarded as pretty satisfactory under the present circumstances. Besides if Mr. Godbole's statement that *Annambhaṭṭa* visited *Mallikârjuna* temple at the age of 55 has any foundation, he must have lived upto an advanced age and may, for aught we know, have covered the whole of the period above indicated.

All attempts to push *Annambhaṭṭa's* date before the first quarter of the 17th century must therefore fail. The colophon of a Ms. of T. S. mentioned by Weber† is said to give the date 1425 A. D. which if true would conclusively prove him to have lived at least two centuries before the time we have assigned to him. But this is not possible. The verse runs thus:—

तपोमास्यासिते कृष्णे चन्द्रनागाब्धिचन्द्रकैः ।
वाराणस्यां मिते वर्षे स्वार्थमिन्दुर्लिलेख वै ॥

Here the expression चन्द्रनागाब्धिचन्द्रकैः has been incorrectly taken to mean *Samvat* 1481 or 1425 A. D. अब्धि ought to be taken for 7 and not 4, and then the date becomes 1725 A. D., making the Ms. 12 years later than that of Dr.

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* Stein:—*Catalogue of Sk. Mss. at Jammu.*

† Weber's Berlin Catalogue, No 683, p. 203.

Jacobi. Whatever uncertainty may still remain on the point, one thing is unquestionable that *Annambhaṭṭa* could have by no means been anterior to *Raghunâtha* whose date is now tolerably settled.* It has also been suggested that the *Tribhuvana-Tilaka* of Kanchi mentioned in T. D.† may be some king contemporary with our author; but this is also not possible, for no king of that name is to be found in the genealogies of Kanchi after the 12th century. Even if the *Tribhuvana-Tilaka* be a real personage he must have lived before the 10th century, for the illustration in T. D. is literally copied from *Śrīdhara's Nyâya-Kandalî* which was written in 991 A. D.‡ No inference can therefore be drawn from the mention of *Tribhuvana-Tilaka* as to the date of our author.

Annambhaṭṭa was the son of *Tirumala* who is styled *Âchârya* and whose name is preceded by the honorific title of अद्वैतविद्याचार्य in the colophons of several of our author's works. The colophon,§ which by the bye has been most useful in proving the identity of the several *Annambhaṭṭas*, is found only in Dr. Jacobi's copy of *Tarka-Dîpikâ* (marked **J**). It however occurs at the end of two other works of *Annambhaṭṭa*, namely *Mitâksharâ*, which is a commentary on the *Brahma-Sûtras* of *Bâdarâyaṇa*, and the fragment of a grammatical work named *Vivaraṇodyotana*, or *Bhâshya-pradipodyotana* consisting of annotations on *Kaiyyaṭa's* celebrated gloss on *Patañjali's Mahâbhâshya*. *Tirumala* father of *Annambhaṭṭa*, appears to have been a Ṛigvedi *Smarta*, Brahmana learned in the Vedanta philosophy and descended from a great man named *Râghava* who performed a *Soma* sacrifice. It is not known whether *Tirumala* wrote any works, but several authors of that name are mentioned by Aufrecht. *Annambhaṭṭa* appears to have been an all-round scholar, for he has left works on at least four sciences, namely *Nyâya*, *Vedânta*, *Vyâkaraṇa* and *Pûrva-Mîmâṁsâ*. Besides the *Tarka-Sangraha* and the *Tarka-Dîpikâ*, Aufrecht

* See *Introduction* p. LIII *supra*.

† See p. 50 *infra*.

‡ See *Introduction* p. XLV *supra* ; P. B. Ben. ed. p. 6.

§ See p. 67 *infra*.

mentions the following works as having been composed by *Annambhatta*:—* 1 *Mitâksharâ*, 2 *Tattva-Bodhinî-Ṭîkâ*, 3 *Nyâya-Pariśishta-Prakâśa* and 4 *Subodhinî-Sudhâsâra*, otherwise called *Rânakojjîvinî*. Of these the first is a short commentary on *Bâdarâyana's Brahma-Sûtras* and is undoubtedly written by the author of the *Tarka-Sangraha*, since it has the same colophon† as is found in our Ms. of the *Dîpikâ* marked **J.** As to the other three nothing can be said with certainty as I have not been able to procure any copy of them. The second appears to be a commentary on some work named *Tattva-Bodhinî*, and Aufrecht marks it as a *Nyâya* work, apparently on the authority of Oppert.‡ Aufrecht does not however mention any *Nyâya* work of the name *Tattva-Bodhinî*, and possibly both he and Oppert were misled. We know only three works bearing the name *Tattva-Bodhinî*, namely, a commentary on *Sankshepa-Śârîraka* by *Nrisimha*, a Tantric work by *Krishnânanda*, and thirdly a commentary on *Bhâttoji's Siddhânta-Kaumudî*. So *Annambhaṭṭa's Ṭîkâ* may be a commentary on either the first or the last. Or it is also possible that a Ms. of *Annambhaṭṭa's Vivaranodyotana*, presently to be mentioned, has been mistaken by Oppert for an independent work of this name. The third work *Nyâya-Pariśishta-Prakâśa* is said to be a commentary on *Udayanâchârya's Nyâya-Pariśishṭa* and may possibly be *Annambhaṭṭa's Magnum Opus* on the *Nyâya* system. The fourth is said to be a commentary on *Rânaka* or *Nyâya-Sudhâ* of *Someśvara* which in its turn is a commentary on the *Tantra-Vârtika* of *Kumârila*. Besides these, Aufrecht and Hall mention two other works on grammar called *Kâtyâyana-Prâtiśâkhya-Vyâkhyâna* and *Mahâ-Bhâshya-Vivaranodyotana* written by an author named *Annambhaṭṭa*.§ The author of the first of these was a pupil

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* Aufrecht: *Catalogus Catalogorum*

† This colophon is repeated at the end of each chapter in a Ms. of the work which I had seen.

‡ Aufrecht: *Catalogus Catalogorum*, p. 20.

§ Hall: *Bibliographical Index of Indian Philosophical systems* p.68,69.

of *Sumaṅgala* and may or may not be the same as the son of *Tirumala.* But the second work *Vivaraṇodyotana* also called *Bhashyapradîpodyotana* which consists of notes on *Kaiyaṭa's* commentary on *Patañjali's Mahâbhâshya* can now be safely ascribed to the author of the *Tarka-Dîpikâ.* Two Mss. of a fragment of this *Udyotana* are mentioned in Hultz's recent Catalogue of Sanskrit Mss. in Southern India (Vol. I p. 66), the colophon at the end of which tallies exactly with that found at the end of the *Dîpikâ* and the *Mitâksharâ.* Hall's later opinion therefore that this *Udyotana* was written by some other *Annambhaṭṭa* cannot be accepted. Chandraśekhara Śâstri of Madras mentions two other works of *Annambhaṭṭa*: *Tattva-Chintâmaṇyâloka-Siddhâñjana* and a *Brahmasûtra-Vritti*, while he calls *Mitâksharâ* a gloss on *Pâṇini's* sûtras according to *Kâśikâ. Annambhaṭṭa* thus appears to have been a versatile writer, since he has written at least three works on *Nyâya*, one on *Pûrva-Mîmâṁsâ*, one or two on *Vedânta*, and two if not three on grammar. *Annambhaṭṭa* is also said to have had an elder brother Râmakṛishṇabhaṭṭa who wrote *Siddhânta-Ratna*, a commentary on Bhaṭṭoji's *Siddhânta-Kaumudî.*

Of all the works of *Annambhaṭṭa*, only the *Tarka-Saṅgraha* and the *Dîpikâ* appear to have attained any wide celebrity. They are the most popular works of their kind, and they have been for several generations used as text-books for beginners. The *Tarka-Saṅgraha* is a model work, because it combines in a remarkable degree the three essential qualities of a good manual, namely, brevity, accuracy and lucidity. It was intended to supply an easy compendium of the main principles of *Nyâya* and *Vaiśeshika* systems, and the author has done his work admirably. Of course the work is not entirely free from faults. Some of its passages are marred by ambiguities of language or confusion of thought such as make them almost unintelligible without the aid of a teacher or a commentary; and even positive errors have crept in one or two places. These occasional lapses were however inevitable, because they are mostly due to the author's anxiety to avoid all subtleties and controversial topics that may be beyond the comprehension of beginners. The attempt

to frame broad and accurate definitions without descending into the niceties of scholastic *Nyâya* was a difficult one, and it is highly creditable to our author that he has succeeded even so well. Passages like those referring to करण, परामर्श, सोपाधिक, and तर्क, as well as several others in the *Dîpikâ*, only prove that even a clear-headed writer like *Annambhaṭṭa* could not avoid some of the pitfalls that are so plentiful in the path of a student of *Nyâya*.

The most glaring fault of the *Tarka-Saṅgraha*, however, is that it errs too much on the side of brevity; and the defect is sought to be cured by supplying some of the deficiencies in the *Dîpikâ*. In fact, the *Dîpikâ* is more like a revised and enlarged edition of the original than a mere commentary upon it. It appears to have been written some time after the *Sangraha*, for in several places the author introduces additions and corrections in the commentary, which are obviously later thoughts but which could not be conveniently inserted in the text after its circulation. The clause अनन्यथासिद्धत्वे सति* which is proposed to be added to the definition of कारण is one instance out of many showing how serious omissions in the text are supplied in the commentary. The way in which some of the new topics are introduced in the *Dîpikâ* also shows that they were most probably suggested when the author was actually teaching his primer. It is not therefore unreasonable to suppose that the *Dîpikâ* came to be written when the author saw by experience the necessity of elucidating the many obscurities that remained in the *Sangraha*. The practice of writing a commentary on one's own work was not uncommon among *Nyâya* writers. In Mediæval times *Dinnâga* and *Dharmakîrti* had written commentaries on their own works. Similarly *Varadarâja* the author of *Târkika-Rakshâ* wrote its commentary the *Vyâkhyâ*, and *Viśvanâtha*, the author of *Bhâshâ-Parichchheda* and *Siddhânta-Muktâvali* immitated him. *Annambhaṭṭa* seems to have taken *Viśvanâtha's* works as his models.

Although *Annambhaṭṭa* rarely quotes or refers to any previous writer, there can be no doubt that he was aware of

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* See T. D. p. 26 *infra*.

the latest views on the many controversial points. He does not slavishly follow any particular master, nor does he confine himself wholly to any of the ancient or modern schools of *Naiyâyikâs*. He chooses his doctrines from all writers with the sole view of constructing a fairly consistent and intelligible system. As the *Saṅgraha* and the *Dîpikâ* are professedly mixtures of both the *Nyâya* and the *Vaiśeshika* systems, the author borrows from writers of both schools; but unlike others who have adopted the same plan, he generally adheres to *Gotama's* views with respect to matters coming under logic proper, *i. e.* in the sections treating of *Buddhi* and its subdivisions, but follows *Kaṇâda* in the rest of the book. In cases of conflict between the ancient and modern *Naiyâyikas* he mostly prefers the ancient view as being the simpler or more striking, and generally adopts the older definitions as far as possible. He has greater sympathy with the older *Âchâryas* than with the modern ever-innovating writers of the Nuddea school. But although a conservative in this sense he generally keeps an impartial attitude and steers clear of all disputes without identifying himself with any particular side. It is this characteristic which distinguishes his works from other manuals, and which makes them as primers for beginners preferable even to the otherwise superior treatises of *Viśvanâtha*.

Instances of specific borrowing are too numerous to mention. Many of his definitions of categories and their subdivisions he has copied literally from the scholium of *Praśastapâda* *e. g.* those of द्रव्य, रूप, रस, गन्ध, स्पर्श, संख्या, परिमाण विशेष, and several others. Sometimes he adopts the emendation suggested by *Śrîdhara*, and sometimes he rejects *Praśastapâdâ's* definition *in toto* in preference to a modern one, *e. g.* in the case of आत्मा and बुद्धि. Occasionally he borrows even long passages from *Praśastapâda*, *e. g.* the passage beginning with सा द्विविधा in Sec. 10 p. 6 *Infra*. He also appears to have borrowed largely from the writings of *Śrîdhara*, *Udayana* and *Śivâditya*, as well as the principal writers of the Nuddea school, *Gaṅgeśa*, *Raghunâtha* and *Gadâdhara*. Outside the circle of *Nyâya* writers, *Annambhaṭṭa* has the

greatest sympathy with the *Vedânta* school. He often quotes the views of the *Mîmâmsakas*, and even inserts a short disquisition on विधि in the concluding portion of the *Dîpikâ*.

Besides the *Tarka-Sangraha* and the *Dîpikâ*, the present edition includes another commentary on the *Sangraha* named *Nyâya-Bodhinî* by *Govardhana*. It does not possess any peculiar feature that requires special notice. It is on the whole rather discursive, treating of some topics elaborately and omitting others altogether. Nothing is known about the writer; but from his work he appears to have been well-versed in the subtleties of the later *Nyâya*. He is apparently different from the writer of a commentary on *Keśavamiśra's Tarka-bhâshâ*. He makes valuable suggestions here and there, but his frequent indulgence in scholastic hair-splitting makes the work somewhat difficult for novices. The obscurity of the style and the want of a reliable Ms. are also great drawbacks in the case of this commentary. It is included in this edition for two reasons, first because it is taught to advanced pupils in many parts of India, and secondly because it will familiarize students with the controversial method and formulæ of the modern *Naiyâyikas*.

The popularity of *Annambhaṭṭa's* works can be best measured by the host of writers who have commented upon them. The commentaries on the *Saṅgraha* are too numerous to notice here, but a list of them, complete as far as our present knowledge goes, is given in Appendix **B**. Only two of these need special mention, the *Vâkya-Vṛitti* of *Meru Śâstri*, and the *Siddhânta-Chandrodaya* of *Śrîkṛishṇa Dhûrjaṭi*. The former is very short but always to the point, and usually gives the meaning of the author in a few pithy sentences. The writer was a celebrated Pundit of modern times, and his remarks in cases of doubt or ambiguity are entitled to great weight. The *Siddhânta-Chandrodaya* being perhaps too copious and exhaustive is useful to beginners but not always reliable. The best guide to the *Sangraha* and the *Dîpikâ*, however is the *Tarka-Dîpikâ-Prakâśa* of *Nîlakaṇṭha*, popularly known as *Nîlakaṇṭhî*.

Nîlakantha appears to be a recent author. According to Pundit Mukunda Jha of Darbhanga he was a son of Râmabhaṭṭa surnamed Pani of Kaundinya gotra and was born in Ândhra country. In his later years he lived at Benares and died in 1840. His son *Lakshmî-Nṛsiṁha* who also lived and died at Benares wrote a commentary, *Bhâskarodayâ* on Nîlakaṇṭha's *Prakâśa*.

ABBREVIATIONS.

B. P.—*Bhâshâ-Parichchheda* by Viśvanâtha Pañchânana, edited and translated by Dr. E. Roer (*Bibliotheca Indica*).

Brahm. Sût. —*Brahma-Sûtras* of Bâdarâyana with the scholium of Śaṅkarâchârya.

Brih. Up. }
Brih. Âr. Up. } *Bṛihadâranyakopanishad.*

Din. —*Dinakarî* or *Siddhânta-Muktâvalî-Prakâśa by* Divâkara Bhaṭṭa.

G. S. —*Gotama-Sûtra* or Gotama's Aphorisms of Nyâya.

J. B. B. R. A. S.—Journal of the Bombay Branch of the Royal Asiatic Society.

Jaimi. S.—Jaimini's *Sûtras* on *Pûrva-mîmâṁsâ.*

Kaṭh. Up. —*Kaṭhopanishad.*

Kus. —*Kusumâñjali* of Udayanâchârya edited and translated by E. B. Cowell. (Calc. 1864.)

N. B. —*Nyâya-Bodhinî* by Govardhana.

Nîl. or Nîlakaṇṭha. —Tarka-Dîpikâ-Prakâśa by Nîlakaṇṭha.

Nyâya-B. —*Nyâya-Bindu* edited by Dr. P. Peterson (*Bibli. Ind.*)

Nyâya-B. T. —*Nyâya-Bindu-Ṭîkâ* by Dharmottarâchârya edited by Dr. P. Peterson.

Nyâya- K. —*Nyâya-Kosha* by Bhîmâchârya 2nd ed. (Bombay Sanskrit Series.)

P. B. —*Praśastapâda's Bhâshya* with Śrîdhara's *Nyâya-Kandalî* edited by Vindhyeśvarîprasâd (Vizianagaram Series, Benares.)

Sânkhya-T. K. —*Sâṅkhya-Tattva-Kaumudî* by Vâchaspatimiśra edited by Târânâth Tarka-Vâchaspati(Calc.1871.)

Sarv. D. S. —*Sarva-Darśana-Sangraha* by Mâdhavâchârya (Calc. ed.)

S. C. —*Siddhânta-Chandrodaya,* a commentary on *Tarka-Saṅgraha* by Śrîkṛishṇa Dhûrjaṭi.

S. M. —*Siddhânta-Muktâvali* by Viśvanâtha Pañchânana.

S. P. —*Sapta-Padârthî* by Śivâditya.

T. A. —*Tarkâmrita* by Jagadîśa.

T. B. —*Tarka-Bhâshâ* by Keśava Miśra, edited by S. M. Paranjpe (Poona.)

T. D. —*Tarka-Dîpikâ.*

T. K. —*Tarka-Kaumudî* by Laugâkshi Bhâskara, edited by M. N. Dvivedi (Bombay Sanskrit Series.)

T. S. —*Tarka-Sangraha.*

Vât. —Vâtsyâyana's Commentary on *Gotama-Sûtra* edited by Jibananda (Cal. 1874.)

Ved. Par. —*Vedânta-Paribhâshâ,* by Dharmarâjâdhvarîndra (Cal. ed.)

V. S. —*Vaiśeshika-Sûtra* or Aphorisms of *Vaiśeshika* philosophy by Kaṇâda.

V. S. Up — *Vaiśeshika-Sûtropaskâra* by Śankara Miśra, edited by Jaya Nârâyaṇa Tarka Pañchânana (Cal. 1861).

V. S. Vṛitti. —*Vaiśeshika-sûtra- Vṛitti* by Viśvanâtha Pañchânana (Cal. ed.)

V. V. —*Vâkya- Vritti,* a commentary on *Tarka-Sangraha* by Meru Śâstri (Bombay 1873).

अथ

तर्कसंग्रहः

तर्कदीपिकया न्यायबोधिन्या च सहितः

[१]

निधाय हृदि विश्वेशं विधाय गुरुवन्दनम् ।
बालानां सुखबोधाय क्रियते तर्कसंग्रहः ॥

अथ तर्कदीपिका

विश्वेश्वरं साम्बमूर्तिं प्रणिपत्य गिरं[1] गुरुम् ।
टीकां शिशुहितां कुर्वे तर्कसंग्रहदीपिकाम् ॥

चिकीर्षितस्य ग्रन्थस्य निर्विघ्नपरिसमाप्त्यर्थं शिष्टाचारानुमितश्रुतिबोधितकर्तव्यताकमिष्टदेवतानमस्कारलक्षणं मङ्गलं शिष्यशिक्षार्थं निबध्नंश्चिकीर्षितं ग्रंथादौ प्रतिजानीते—**निधायेति** ।

ननु मङ्गलस्य समाप्तिसाधनत्वं नास्ति । मङ्गले कृतेऽपि किरणावल्यादौ समाप्त्यदर्शनात् मङ्गलाभावेऽपि कादम्बर्यादौ समाप्तिदर्शनादन्वयव्यतिरेकव्यभिचारादिति चेन्न । किरणावल्यादौ विघ्नबाहुल्यात्समाप्त्यभावः । कादम्बर्यादौ तु ग्रन्थाद्बहिरेव मङ्गलं कृतमतो न व्यभिचारः ॥

ननु मङ्गलस्य कर्तव्यत्वे किं प्रमाणमिति चेत् । न । शिष्टाचारानुमितश्रुते-

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1 *Nil* gives as *v. l.* गिरां गुरुं and explains it निखिलविद्यानामुपदेष्टारम्. Y also reads गिरां.

2 A and F read निर्विघ्नपरिसमाप्त्य°, but all other copies omit निर्विघ्न°; P has असमाप्ति.°

3 M has बौद्धग्रन्थादौ for कादम्बर्यादौ in this and the following sentence. F and Q interchange कादम्बर्यादौ and किरणावल्यादौ retaining the remaining sentence as above. N reads differently मङ्गलाभावेऽपि किरणावल्यादौ समाप्तिदर्शनात् मङ्गलसत्वेऽपि कादम्बर्यादौ समाप्त्यदर्शनात्, and gives the other *v. l.* in a footnote. See Note *loc. cit.*

रेव प्रमाणत्वात् । तथाहि—मङ्गलं वेदबोधितकर्तव्यताकं, अलौकिकाविगीतशिष्टाचारविषयत्वात् दर्शादिवत् । भोजनादौ व्यभिचारवारणायालौकिकेति । रात्रिश्राद्धादौ व्यभिचारवारणायाविगीतेति । शिष्टपदं स्पष्टार्थम् । "न कुर्यान्निष्फलं कर्म" इति जलताडनादेरपि निषिद्धत्वादिति ॥

तर्कसंग्रह इति । तर्क्यन्ते प्रतिपाद्यन्त इति तर्का द्रव्यादिसप्तपदार्थास्तेषां संग्रहः संक्षेपेण स्वरूपकथनं क्रियत इत्यर्थः । कस्मै प्रयोजनायेत्यत आह—**सुखबोधाये**ति । सुखेनानायासेन बोधः पदार्थज्ञानं तस्मा इत्यर्थः ॥ ननु बहुषु तर्कग्रन्थेषु सत्सु किमर्थमपूर्वग्रन्थः क्रियत इत्यत आह—**बालाना**मिति । तेषामतिविस्तृतत्वाद्बालानां बोधो न भवतीत्यर्थः । ग्रहणधारणपटुर्बालः, न तु स्तनन्धयः । किं कृत्वा क्रियत इत्यत आह—**निधाये**ति । विश्वेशं जगन्नियन्तारं शिवं हृदि निधाय नितरां स्थापयित्वा, सर्वदा तद्ध्यानपरो भूत्वेत्यर्थः । गुरूणां विद्यागुरूणां वन्दनं नमस्कारं विधाय कृत्वेत्यर्थः ॥

अथ न्यायबोधिनी

अखिलागमसंचारि श्रीकृष्णाख्यं परं महः ।
ध्यात्वा गोवर्धनसुधीस्तनुते न्यायबोधिनीम् ॥

चिकीर्षितस्य ग्रन्थस्य निर्विघ्नपरिसमाप्त्यर्थमिष्टदेवतानमस्कारात्मकं मङ्गलं शिष्यशिक्षार्थं ग्रन्थादौ निबध्नाति—**निधाये**ति ॥

[२]

द्रव्यगुणकर्मसामान्यविशेषसमवायाभावाः सप्त पदार्थाः ॥

त. दी.—पदार्थान्विभजते—**द्रव्ये**ति । पदस्यार्थः पदार्थ इति व्युत्पत्त्याभिधेयत्वं पदार्थसामान्यलक्षणम् ॥ नन्वत्र विभागादेव सप्तत्वे सिद्धे सप्तग्रहणं व्यर्थमिति चेत् । न । अधिकसंख्याव्यवच्छेदार्थत्वात् ॥ नन्वति-

1 Some Mss. add "समाप्तिकामो मंगलमाचरेत्" इति श्रुतेः । but the addition is not warranted as the context refers to अनुमितश्रुति only.

2 G reads पदार्थाः सप्तैव.

3 A F M and P add लभ्यते and also inserts इति before it

4 A F and P add न्यून before अधिक unnecessarily; Y Z read लब्धे for सिद्धे; Q. has किमर्थं for व्यर्थम्.

रिक्तः पदार्थः प्रमितो न वा। नाद्यः प्रमितस्य निषेधायोगात्, नान्त्यः प्रतियोगिप्रमितिं विना निषेधानुपपत्तेरिति चेत्। न। पदार्थत्वं द्रव्यादिसप्तान्यतमत्वव्याप्यमिति व्यवच्छेदार्थत्वात् ॥ ननु सप्तान्यतमत्वं सप्तभिन्नभिन्नत्वमिति वक्तव्यम् । एवं च सप्तभिन्नस्याप्रसिद्धत्वात्सप्तान्यतमत्वं कथमिति चेन्न द्रव्यादिसप्तान्यतमत्वं द्रव्यादिभेदसप्तकाभाववत्त्वमित्युक्तत्वात् । एवमग्रेऽपि द्रष्टव्यम् ॥

न्या. बो.—अथ पदार्थान्विभजते—**द्रव्येति** ॥ तत्र सप्तग्रहणं पदार्थत्वं द्रव्यादिसप्तान्यतमत्वव्याप्यमिति व्याप्तिलाभाय। ननु शक्तिपदार्थस्याष्टमस्य सत्त्वात्कथं सप्तैवेति। तथाहि वह्निसंयुक्तेन्धनादौ सत्यपि मणिसंयोगे दाहो न जायते तच्छून्ये तु जन्यते । अतो मणिसमवधाने शक्तिर्नश्यति। मण्यभावदशायां दाहानुकूला शक्तिरुत्पद्यत इति कल्प्यते। तस्माच्छक्तिरतिरिक्तपदार्थ इति चेन्न। मणेः प्रतिबन्धकत्वेन तदभावस्य दाहकारणत्वेनैव निर्वाहे मणिसमवधानासमवधानाभ्यामनन्तशक्तितत्ध्वंसतत्तत्प्रागभावकल्पनाया अन्याय्यत्वात्।तस्मात्सप्तैव पदार्था इति सिद्धम्॥

[२]

तत्र द्रव्याणि पृथिव्यप्तेजोवाय्वाकाशकालदिगात्ममनांसि नवैव ॥

त. दी.—द्रव्यं विभजते—**तत्रेति** । तत्र द्रव्यादिमध्ये द्रव्याणि नवैवेत्यन्वयः । कानि तानीत्यत आह—**पृथिवीत्यादि** । ननु तमसो दशमद्रव्यस्य विद्यमानत्वात्कथं नवैव द्रव्याणि। तथाहि[2] नीलं तमश्चलतीत्यबाधितप्रतीतिबलान्नीलरूपाधारतया क्रियाधारतया च द्रव्यत्वं तावत्सिद्धम् । तत्र तमसो नाकाशादिपञ्चकेऽन्तर्भावो रूपवत्त्वात्। अत एव न वायौ, स्पर्शाभावात्[3]सदागतिमत्त्वाभावाच्च। नापि तेजसि, भास्वररूपाभावा-

1 Q. omits इति वक्तव्यम् and substitutes तदर्थत्वात् or इत्युक्तत्वात्. L omits the whole passage from ननु to उक्तत्वात्; *Nil* also appears to have had doubts about its authenticity. See Note *loc. cit.*

2 A and F add after तथाहि a verse तमः खलु चलं नीलं परापरविभागवत् । प्रसिद्धद्रव्यवैधर्म्यान्नवभ्यो भेत्तुमर्हति; but it seems to be interpolated from some other commentary. J omits तथाहि also.

3 A and J omit स्पर्शाभावात्.

दुष्णस्पर्शाभावाच्च। नापि जले, शीतस्पर्शाभावान्नीलरूपाश्रयत्वाच्च। नापि पृथिव्यां, गन्धवत्त्वाभावात्स्पर्शरहितत्वाच्च। तस्मात्तमो दशमद्रव्यमिति चेन्न। तमसस्तेजोऽभावरूपत्वात्। तथाहि—तमो हि न रूपवद्द्रव्यमालोकासहकृतचक्षुर्ग्राह्यत्वादालोकाभाववत्। रूपिद्रव्यचाक्षुषप्रमायामालोकस्य कारणत्वात्। तस्मात्प्रौढप्रकाशकतेजःसामान्याभावस्तमः। तत्र नीलं तमश्चलतीति प्रत्ययो भ्रमः। अतो नव द्रव्याणीति सिद्धम्॥

द्रव्यत्वजातिमत्त्वं गुणवत्त्वं वा द्रव्यसामान्यलक्षणम्॥ लक्ष्यैकदेशावृत्तित्वमव्याप्तिः, यथा गोः कपिलत्वम्। अलक्ष्यवृत्तित्वमतिव्याप्तिः, यथा गोः शृङ्गित्वम्। लक्ष्यमात्रावर्तनमसंभवः यथा गोरेकशफत्वम्। एतद्दूषणत्रयरहितो धर्मो लक्षणम्। स एवासाधारणधर्म इत्युच्यते। लक्ष्यतावच्छेदकसमनियतत्वमसाधारणत्वम्। व्यावर्तकस्यैव लक्षणत्वे व्यावृत्तावभिधेयत्वादौ चातिव्याप्तिवारणाय तद्भिन्नत्वं धर्मविशेषणं देयम्। व्यवहारस्यापि लक्षणप्रयोजनत्वे तु न देयम्, व्यावृत्तेरपि व्यवहारसाधनत्वात्॥ ननु गुणवत्त्वं न द्रव्यसामान्यलक्षणम्। आद्यक्षणे उत्पन्नविनष्टद्रव्ये चाव्याप्तेरिति चेन्न। गुणसमानाधिकरणसत्ताभिन्नजातिमत्त्वस्य विवक्षितत्वात्॥ नन्वेवमप्येकं रूपं रसात्पृथगिति व्यवहाराद्रूपादावतिव्याप्तिरिति चेन्न। एकार्थसमवायादेव तादृशव्यवहारोपपत्तौ गुणे गुणानङ्गीकरणात्॥

न्या. बो.—द्रव्याणि विभजते—**पृथिवी**ति। नन्वन्धकारस्य दशमद्रव्यस्य सत्त्वात्कथं नवैवेति। तथाहि नीलं तमश्चलतीति प्रतीतेर्नीलरूपाश्रयत्वेन क्रियाश्रयत्वेन च द्रव्यत्वं सिद्धम्। न च वक्ष्यमाणद्रव्येष्वन्तर्भावात्कुतो दशमद्रव्यत्वमिति वाच्यम्। आकाशादिपञ्चकस्य नीरूपत्वाद्वायोरपि नीरूपत्वान्न तेष्वन्तर्भावः। तमसो निर्गन्धत्वान्न पृथिव्यामन्तर्भावः।

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1 A F & Q. read रूपि for रूपवत्.

2 A F and Q here insert यथा गोः सास्नादिमत्त्वम्, while P and Y have यथा गोः सास्नादिमत्त्वे सति शृङ्गित्वम्; but the words are found in no other copy.

3 *Nil.* notices लक्षणत्वे as *v. l.* for लक्षणत्वे, and remarks that the two readings are identical in s use.

4 M adds संयोगसमवायिकारणतावच्छेदकतया द्रव्यत्वजातिः.

जलतेजसोः शीतोष्णस्पर्शवत्त्वान्न तयोरन्तर्भावः। तस्मात्तमसो दशमद्रव्यत्वं सिद्धमितिचेन्न। तमसस्तेजोऽभावत्वेनैवोपपत्तावतिरिक्तद्रव्यकल्पनायां मानाभावात्। न च विनिगमनाविरहात्तेज एवान्धकाराभावस्वरूपमिति वाच्यम्। तेजसोऽभावस्वरूपत्वे सर्वानुभूतोष्णस्पर्शस्याश्रयबाधाद्द्रव्यान्तरकल्पने गौरवात्। तस्मादुष्णस्पर्शरूपगुणाश्रयतया तेजसो द्रव्यत्वं सिद्धम्। तमसि नीलरूपप्रतीतिस्तु भ्रान्तिरेव दीपापसरणक्रियाया एव तत्र भानात्॥

[४]

रूपरसगन्धस्पर्शसंख्यापरिमाणपृथक्त्वसंयोगविभागपरत्वापरत्वगुरुत्वद्रवत्वस्नेहशब्दबुद्धिसुखदुःखेच्छाद्वेषप्रयत्नधर्माधर्मसंस्काराश्चतुर्विंशतिगुणाः॥

त. दी.—गुणं विभजते—**रूपेति**। द्रव्यकर्मभिन्नत्वे सति सामान्यवान्गुणः। गुणत्वजातिमान्वा। ननु लघुत्वमृदुत्वकठिनत्वादीनां विद्यमानत्वात्कथं चतुर्विंशतिगुणा इति चेन्न लघुत्वस्य गुरुत्वाभावरूपत्वात् मृदुत्वकठिनत्वयोरवयवसंयोगविशेषरूपत्वात्॥

[५]

उत्क्षेपणावक्षेपणाकुञ्चनप्रसारणगमनानि पञ्च कर्माणि॥

त. दी.—कर्म विभजते—**उत्क्षेपणेति**। संयोगभिन्नत्वे सति संयोगासमवायिकारणं कर्म। कर्मत्वजातिमद्वा॥ ननु भ्रमणादेरप्यतिरिक्तस्य कर्मणः सत्त्वात् पञ्चेत्यनुपपन्नमितिचेन्न। भ्रमणादीनामपि गमनेऽन्तर्भावान्न पञ्चविधत्वविरोधः॥

[६]

परमपरं चेति द्विविधं सामान्यम्॥

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1 U. and W read स्पर्शाश्रयद्रव्यं.

2 U. has नीलत्वादि and W. adds एवं कर्मवत्ताप्रतीतिरपि.

3 N here adds सामान्यवानित्युक्ते द्रव्यकर्मणोरतिव्याप्तिरतस्तन्निरासार्थं द्रव्यकर्मभिन्नत्वे सतीति। द्रव्यकर्मभिन्न इत्युच्यमाने सामान्यादिष्वतिव्याप्तिरत उक्तं सामान्यवानिति; but the passage is neither noticed by *Nil.* nor found in any other copy.

4 A. and F add एव after पञ्च.

5 Some Mss. omit this sentence.

त. दी.—सामान्यं विभजते—परमिति । परमधिकदेशवृत्ति । अपरं न्यूनदेशवृत्ति । सामान्यादिचतुष्टये जातिर्नास्ति ॥

[७]

नित्यद्रव्यवृत्तयो विशेषास्त्वनन्ता एव ॥

त. दी.—विशेषं विभजते—नित्येति । पृथिव्यादिचतुष्टयस्य परमाणव आकाशादिपञ्चकं च नित्यद्रव्याणि ॥

[८]

समवायस्त्वेक एव ॥

त. दी.—समवायस्य भेदो नास्तीत्याह—**समवायस्त्विति** ॥

[९]

अभावश्चतुर्विधः । प्रागभावः प्रध्वंसाभावोऽत्यन्ताभावोऽन्योन्याभावश्चेति ॥

त. दी.—अभावं विभजते—**अभावेति** ॥

[१०]

गन्धवती पृथिवी । सा द्विविधा नित्यानित्या च । नित्या परमाणुरूपा । अनित्या कार्यरूपा । पुनस्त्रिविधा शरीरेन्द्रियविषयभेदात् । शरीरमस्मदादीनाम् । इन्द्रियं गन्धग्राहकं घ्राणं नासाग्रवर्ति । विषयो मृत्पाषाणादिः ॥

त. दी.—तत्रोद्देशादिक्रमानुसारात्पृथिव्या लक्षणमाह—**गन्धवतीति** । नाम्ना पदार्थसंकीर्तनमुद्देशः । उद्देशक्रमे च सर्वत्रेच्छैव नियामिका । ननु सुरभ्यसुरभ्यवयवारब्धे द्रव्ये परस्परविरोधेन गन्धानुत्पादादव्याप्तिः । न च तत्र गन्धप्रतीत्यनुपपत्तिरिति वाच्यम् । अवयवगन्धस्यैव तत्र

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1 A omits देश.

2 A D F K Q. W. and X add तत्र before गन्धवती; See Note *loc. cit.*

3 A and B add इति after च.

4 All copies except A B and F omit सा before पुनः; See Note *loc. cit.*

प्रतीतिसंभवेन चित्रगन्धानङ्गीकारात् ॥ किं चोत्पन्नविनष्टघटादावव्याप्तिरिति चेन्न गन्धसमानाधिकरणद्रव्यत्वापरजातिमत्त्वस्यैव विवक्षितत्वात्। ननु जलादावपि गन्धप्रतीतेरतिव्याप्तिरिति चेन्न अन्वयव्यतिरेकाभ्यां पृथिवीगन्धस्यैव तत्र भानाङ्गीकारात्। ननु तथापि कालस्य सर्वाधारतया सर्वेषां लक्षणानां कालेऽतिव्याप्तिरिति चेन्न सर्वाधारताप्रयोजकसंबन्धभिन्नसंबन्धेन लक्षणस्याभिमतत्वात् ॥

पृथिवीं विभजते—**सा द्विविधे**ति। नित्यत्वं ध्वंसाप्रतियोगित्वम्। ध्वंसप्रतियोगित्वमनित्यत्वम् ॥ प्रकारान्तरेण विभजते—**पुन**रिति। आत्मनो भोगायतनं शरीरम्। यदवच्छिन्नात्मनि भोगो जायते तद्भोगायतनम्। सुखदुःखान्यतरसाक्षात्कारो भोगः ॥ शब्देतरोद्भूतविशेषगुणानाश्रयत्वेसति ज्ञानकारणमनःसंयोगाश्रयत्वमिन्द्रियत्वम्। शरीरेन्द्रियभिन्नो विषयः ॥ एवं च गन्धवच्छरीरं पार्थिवशरीरम् गन्धवदिन्द्रियं पार्थिवान्द्रियम् गन्धवान्विषयः पार्थिवविषय इति तत्तल्लक्षणं बोध्यम् ॥ पार्थिवशरीरं दर्शयति—**शरीर**मिति। पार्थिवेन्द्रियं दर्शयति—**इन्द्रिय**मिति। **गन्धग्राहक**मिति प्रयोजनकथनम्। **घ्राण**मिति संज्ञा। **नासाग्रे**त्याश्रयोक्तिः। एवमुत्तरत्रापि ज्ञेयम्। पार्थिवविषयं दर्शयति—**विषये**ति ॥

न्या. बो.—गन्धवतीति। गन्धवत्त्वं पृथिव्या लक्षणम्। लक्ष्या पृथिवी। पृथिवीत्वं लक्ष्यतावच्छेदकम्। यद्धर्मावच्छिन्नं लक्ष्यं स धर्मो लक्ष्यतावच्छेदकः। यो धर्मो यस्यामवच्छेदकः सा तद्धर्मावच्छिन्ना लक्ष्यता। तथा च लक्ष्यतावच्छेदकं पृथिवीत्वं, लक्ष्यता पृथिवीत्वावच्छिन्ना। एवं शीतस्पर्शादिलक्षणेषु जलादीनां लक्ष्यता जलत्वादीनां लक्ष्यतावच्छेकत्वं च बोध्यम् ॥

[११]

शीतस्पर्शवत्य आपः। ता द्विविधाः नित्या अनित्याश्च। नित्याः परमाणुरूपाः। अनित्याः कार्यरूपाः। पुनस्त्रिविधाः शरीरेन्द्रियवि-

1 A and B insert ताः before पुनः. See Note on सा in the last preceding section.

षयभेदात्। शरीरं वरुणलोके। इन्द्रियं रसग्राहकं रसनं जिह्वाग्रवर्ति। विषयः सरित्समुद्रादिः॥

त. दी.—अपां लक्षणमाह—**शीते**ति। उत्पन्नविनष्टजलेऽव्याभिवारणाय शीतस्पर्शसमानाधिकरणद्रव्यत्वापरजातिमत्त्वे तात्पर्यम्। शीतं शिलातलमित्यादौ जलसंबन्धादेव शीतस्पर्शभानमिति नातिव्याप्तिः। अन्यत्सर्वं पूर्वरीत्या व्याख्येयम्॥

[१२]

उष्णस्पर्शवत्तेजः। तद्विविधं नित्यमनित्यं च। नित्यं परमाणुरूपम्। अनित्यं कार्यरूपम्। पुनस्त्रिविधं शरीरेन्द्रियविषयभेदात्। शरीरमादित्यलोके[1]। इन्द्रियं रूपग्राहकं चक्षुः कृष्णताराग्रवर्ति। विषयश्चतुर्विधः। भौमदिव्यौदर्याकरजभेदात्। भौमं वन्ह्यादिकम्। अविन्धनं दिव्यं विद्युदादि। भुक्तस्य परिणामहेतुरौदर्यम्। आकरजं सुवर्णादि॥

त. दी.—तेजसो लक्षणमाह—**उष्णस्पर्श**वदिति। उष्णं जलमिति प्रतीतिस्तेजःसंबन्धानुविधायित्वान्नातिव्याप्तिः। विषयं विभजते—**भौमे**ति। ननु सुवर्णं पार्थिवं पीतत्वाद्गुरुत्वाद्धरिद्रादिवदिति चेन्न। अत्यन्तानलसंयोगे सति घृतादौ द्रवत्वनाशदर्शनेन, जलमध्यस्थघृतादौ द्रवत्वनाशादर्शनेन, असति प्रतिबन्धके पार्थिवद्रव्यद्रवत्वनाशाग्निसंयोगयोः कार्यकारणभावावधारणात्। सुवर्णस्यात्यन्तानलसंयोगे सत्यनुच्छिद्यमानद्रवत्वादिकरणत्वेन[2] पार्थिवत्वानुपपत्तेः। तस्मात्पीतद्रव्यद्रवत्वनाशप्रतिबन्धकतया द्रवद्रव्यान्तरसिद्धौ नैमित्तिकद्रवत्वाधिकरणतया जलत्वानुपपत्तेः, रूपवत्तया वाय्वादिष्वनन्तर्भावात्, तैजसत्वसिद्धिः। तत्रोष्णस्पर्शभास्वररूपयोरुपष्टम्भकपार्थिवरूपस्पर्शाभ्यां प्रतिबन्धादनुपलब्धिः। तस्मात्सुवर्णं तैजसमिति सिद्धम्॥

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1 A B and X add **प्रसिद्धं** after **आदित्यलोके**.

2 A inserts **घृतवत्** after °**त्वाधिकरणत्वेन**.

[१३]

रूपरहितस्पर्शवान्वायुः । स द्विविधो नित्योऽनित्यश्च । नित्यः परमाणुरूपः । अनित्यः कार्यरूपः । पुनस्त्रिविधः शरीरेन्द्रियविषयभेदात् । शरीरं वायुलोके । इन्द्रियं स्पर्शग्राहकं त्वक्सर्वशरीरवर्ति । विषयो वृक्षादिकम्पनहेतुः ॥

शरीरान्तःसंचारी वायुः प्राणः । स चैकोऽप्युपाधिभेदात्प्राणापानादिसंज्ञां लभते ॥

त. दी.—वायुं लक्षयति—**रूपरहितेति**। आकाशादावतिव्याप्तिवारणाय **स्पर्शवानि**ति। पृथिव्यादावतिव्याप्तिवारणाय **रूपरहितेति**। ननु प्राणस्य कुत्रान्तर्भाव इत्यत आह—**शरीरेति**। **स चेति**। एक एव प्राणः स्थानभेदात्प्राणापानादिशब्दैर्व्यवह्रियत इत्यर्थः। स्पर्शानुमेयो वायुः। तथाहि—योऽयं वायौ वाति सत्यनुष्णाशीतस्पर्शो भासते स स्पर्शः क्वचिदाश्रितो गुणत्वाद्रूपवत्। न चास्य पृथिव्याश्रय उद्भूतस्पर्शवतः पार्थिवस्योद्भूतरूपवत्त्वनियमात्। न जलतेजसी, अनुष्णाशीतस्पर्शवत्त्वात्। न विभुचतुष्टयं, सर्वत्रोपलब्धिप्रसङ्गात्। न मनः, परमाणुस्पर्शस्यातीन्द्रियत्वात्। तस्माद्यः प्रतीयमानस्पर्शाश्रयः स वायुः॥ ननु वायुः प्रत्यक्षः प्रत्यक्षस्पर्शाश्रयत्वाद्घटवदिति चेन्न। उद्भूतरूपवत्त्वस्योपाधित्वात्। यत्र द्रव्यत्वे सति बहिरिन्द्रियजन्यप्रत्यक्षत्वं तत्रोद्भूतरूपवत्त्वमिति घटादौ साध्यव्यापकत्वम्। यत्र प्रत्यक्षस्पर्शाश्रयत्वं तत्रोद्भूतरूपवत्त्वं नास्तीति पक्षे साधनाव्यापकत्वम्। न चैवं तप्तवारिस्थतेजसोऽप्यप्रत्यक्षत्वापत्तिः। इष्टत्वात्। तस्माद्रूपरहितत्वाद्वायुरप्रत्यक्षः॥

इदानीं कार्यरूपपृथिव्यादिचतुष्टयस्योत्पत्तिविनाशक्रमः कथ्यते। ईश्वरस्य चिकीर्षावशात्परमाणुषु क्रिया जायते। ततः परमाणुद्वयसंयोगे सति द्व्यणुकमुत्पद्यते। त्रिभिर्द्व्यणुकैस्त्र्यणुकम्। एवं चतुरणुकादिक्रमेण महती पृथिवी महत्य आपो महत्तेजो महान्वायुरुत्पद्यते। एवमुत्पन्नस्य कार्यद्रव्यस्य संजिहीर्षावशात्परमाणुषु क्रिया। क्रियया

परमाणुद्वयविभागे सति द्व्यणुकनाशः । ततस्त्र्यणुकनाशः । ततश्चतुर-णुकस्येत्येवं महापृथिव्यादिनाशः ॥ असमवायिकारणनाशाद्द्व्यणुकनाशः, समवायिकारणनाशात्त्र्यणुकनाश इति संप्रदायः । सर्वत्रासमवायिकार-णनाशाद्द्रव्यनाश इति नवीनाः ॥

किं पुनः परमाणुसद्भावे प्रमाणम् । उच्यते । जालसूर्यमरीचिस्थं सूक्ष्मतमं यद्रज उपलभ्यते तत्सावयवम्, चाक्षुषद्रव्यत्वात्पटवत् । त्र्यणु-कावयवोऽपि सावयवो महदारम्भकत्वात्तन्तुवत् । यो द्व्यणुकावयवः स परमाणुः । स च नित्यः । तस्यापि कार्यत्वेऽनवस्थाप्रसङ्गात् । सृष्टिप्रलय-सद्भावे "धाता यथा पूर्वमकल्पयत्" इत्यादि श्रुतिः प्रमाणम् । सर्व-कार्यद्रव्यध्वंसोऽवान्तरप्रलयः । सर्वभावकार्यध्वंसो महाप्रलय इति विवेकः॥

न्या. बो.—एवं पृथिव्यादि त्रिकं निरूप्य वायुं निरूपयति--**रूपरहिते**ति । रूपरहितत्वे सति स्पर्शवत्त्वं वायोर्लक्षणम् । सातिसप्त-म्या विशिष्टार्थकतया रूपरहितत्वविशिष्टस्पर्शवत्त्वं वायोर्लक्षणम् । विशे-षणानुपादाने स्पर्शवत्त्वमात्रस्य लक्षणत्वे पृथिव्यादित्रिकेऽतिव्याप्ति स्तद्वारणाय विशेषणोपादानम् । तावन्मात्रोपादाने आकाशादिपञ्चकेऽ-तिव्याप्तिस्तत्रापि रूपरहितत्वस्य सत्त्वात् । अत उक्तं **स्पर्शे**ति । अति-व्याप्तिर्नामालक्ष्ये लक्षणसत्त्वम् । यथा गोः शृङ्गित्वं लक्षणं कृतं चेद् लक्ष्यभूतगोभिन्नमहिष्यादावतिव्याप्तिस्तत्रापि शृङ्गित्वस्य विद्यमानत्वात् । अव्याप्तिर्नाम लक्ष्यैकदेशावृत्तित्वम् । लक्ष्यतावच्छेदकाश्रयीभूते क्वचिल्लक्ष्ये लक्षणस्यासत्त्वमेवाव्याप्तिरित्यर्थः । यथा गोर्नीलरूपवत्त्वं कृतं चेच्छ्वे-तगवि नीलरूपाभावादव्याप्तिः । असंभवो नाम लक्ष्यमात्रे क्वापि लक्षणासत्त्वं यथा गोरेकशफत्वं गोसामान्यस्य द्विशफत्वेनैकशफवत्त्वस्य

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1 A F N. Q. and W add after this तथा च मेरुसर्षपयोरपि समान-परिमाणत्वापत्ति . F reads °पत्तेः, N has तुल्यत्वप्रसङ्गः for समान-परिमाणत्वापत्तिः, while Q. has तु-ल्यपरिमाणापत्तेः; but as all other copies omit the sentence it seems to be an interpolation.

2 A C, N, P Y Z put the first part of the sentence in the form of a पूर्वपक्ष as ननु सृष्टिप्र-लयसद्भावे किं प्रमाणम्; A C K Z omit ननु; A K Y read मानम् for प्रमाणम्.

3 V and W omit this sentence.

कुत्राप्यसत्वात्[1] । अतिव्याप्त्यव्याप्त्यसंभवानां निष्कृष्टलक्षणान्युच्यन्ते । लक्ष्यतावच्छेदकसमानाधिकरणत्वे सति लक्ष्यतावच्छेदकावच्छिन्नप्रतियोगिताकभेदसामानाधिकरण्यमतिव्याप्तिः । अव्याप्तिस्तु लक्ष्यतावच्छेदकसमानाधिकरणत्वे सति लक्ष्यतावच्छेदकसमानाधिकरणात्यन्ताभावप्रतियोगित्वम् । असंभवस्तु लक्ष्यतावच्छेदकव्यापकीभूताभावप्रतियोगित्वम् ॥

[१४]

शब्दगुणमाकाशम् । तच्चैकं विभु नित्यं च ॥

त. दी.—आकाशं लक्षयति **शब्दगुणमि**ति । नन्वाकाशमपि किं पृथिव्यादिवन्नाना । नेत्याह—**तच्चैकमि**ति । भेदे प्रमाणाभावादित्यर्थः । एकत्वादेव सर्वत्रोपलब्धेर्विभुत्वमङ्गीकर्तव्यमित्याह—**विभ्वि**ति । सर्वमूर्तद्रव्यसंयोगित्वं विभुत्वम् । मूर्तत्वं परिच्छिन्नपरिमाणवत्त्वं क्रियावत्त्वं वा । विभुत्वादेवात्मवन्नित्यमित्याह—**नित्यं चे**ति ॥

न्या. बो.—आकाशं लक्षयति । **शब्दगुणकमि**ति । अत्र गुणपदमाकाशे शब्द एव विशेषगुण इति द्योतनाय नत्वतिव्याप्तिवारणाय । समवायेन शब्दवत्वमात्रस्य सम्यक्त्वात् । तदुक्तं । रूपं गन्धो रसः स्पर्शः स्नेहः सांसिद्धिको द्रवः । बुद्ध्यादिभावनान्ताश्च शब्दो वैशेषिका गुणाः ॥ **तच्चैकमि**ति । अनेकत्वे मानाभावादिति भावः । **विभ्वि**ति । सर्वमूर्तद्रव्यसंयोगित्वं विभुत्वम् । मूर्तत्वं च क्रियाश्रयत्वम् । पृथिव्यप्तेजोवायुमनांसि मूर्तानि । पृथिव्यप्तेजोवाय्वाकाशपञ्चकं भूतपदवाच्यम् । भूतत्वं नाम बहिरिन्द्रियग्राह्यविशेषगुणवत्वम् ॥

[१५]

अतीतादिव्यवहारहेतुः कालः । स चैको विभुर्नित्यश्च ॥

त. दी.—कालं लक्षयति—**अतीते**ति । सर्वाधारः कालः सर्वकार्यनिमित्तकारणं च ॥

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1 V reads निर्दुष्टलक्षणमुच्यते for निष्कृष्टलक्षणान्युच्यन्ते.

न्या. बो.—कालं लक्षयति—अतीतेति। व्यवहारहेतुत्वस्य लक्षणत्वे व्यवहारहेतुभूतघटादावतिव्याप्तिस्तद्वारणाय । अतीतेति विशेषणोपादानम् ॥

[१६]

प्राच्यादिव्यवहारहेतुर्दिक् । सा चैका विभ्वी नित्या च ॥

त. दी.—दिशो लक्षणमाह—प्राच्येति । दिगपि कार्यमात्रे निमित्तकारणम् ॥

न्या. बो.—दिशो लक्षणमाह—प्राच्येति । उदयाचलसंनिहिता दिक्प्राची । अस्ताचलसंनिहिता दिक्प्रतीची । मेरोः संनिहिता दिगुदीची । मेरोर्व्यवहिता दिगवाची ॥

[१७]

ज्ञानाधिकरणमात्मा । स द्विविधः परमात्मा जीवात्मा च । तत्रेश्वरः सर्वज्ञः परमात्मैक एव । जीवात्मा प्रतिशरीरं भिन्नो विभुर्नित्यश्च ॥

त. दी.—आत्मनो लक्षणमाह—ज्ञानेति ॥ आत्मानं विभजते—स द्विविध इति । परमात्मनो लक्षणमाह—तत्रेति । नित्यज्ञानाधिकरणत्वमीश्वरत्वम् ॥ नन्वीश्वरस्य सद्भावे किं प्रमाणम् । न तावत्प्रत्यक्षम् । तद्धि बाह्यमाभ्यन्तरं वा । नाद्यमरूपिद्रव्यत्वात् । नान्त्यमात्मसुखादिव्यतिरिक्तत्वात् । नाप्यनुमानं लिङ्गाभावादिति चेन्न । क्षित्यङ्कुरादिकं कर्तृजन्यं कार्यत्वाद्घटवदित्यनुमानस्य प्रमाणत्वात् ।

1 A B C F, Q. and X read नित्या विभ्वी च, but the reading adopted in the text is better as it agrees with the definitions of काल and आत्मा.

2 A B X जीवात्मा परमात्मा च, C, G जीवः for जीवात्मा.

3 A B add सुखदुःखादिरहितः after एव.

4 A F and Q. insert नाप्यागमस्तथाविधागमाभावात् after लिङ्गाभावात्, but the words appear to be interpolated and are inconsistent with the Vedic text cited further on. Z has नाप्युपमानं सादृश्याभावात् नापि शब्दः शब्दस्य वेदात्मकस्येश्वरोक्तत्वेन प्रामाण्यादीश्वरासिद्धौ तत्प्रामाण्यासिद्धेः.

उपादानगोचरापरोक्षज्ञानचिकीर्षाकृतिमत्त्वं कर्तृत्वम् । उपादानं समवायिकारणम् । सकलपरमाण्वादिसूक्ष्मदर्शित्वात्सर्वज्ञत्वम् । " यः सर्वज्ञः स सर्वविद् " इत्याद्यागमोऽपि तत्र प्रमाणम् ॥

जीवस्य लक्षणमाह—**जीव** इति । सुखाद्याश्रयत्वं जीवलक्षणम् । ननु " मनुष्योऽहं ब्राह्मणोऽहम् " इत्यादौ सर्वत्राहंप्रत्यये शरीरस्यैव विषयत्वाच्छरीरमेवात्मेति चेन्न । शरीरस्यात्मत्वे करपादादिनाशे सति शरीरनाशादात्मनोऽपि नाशप्रसङ्गात् । नापीन्द्रियाणामात्मत्वम् । तथात्वे " योऽहं घटमद्राक्षं सोऽहमिदानीं त्वचा स्पृशामि " इत्यनुसंधानाभावप्रसङ्गादन्यानुभूतेऽन्यस्यानुसंधानायोगात् । तस्माद्देहेन्द्रियव्यतिरिक्तो जीवः । सुखदुःखादिवैचित्र्यात्प्रतिशरीरं भिन्नः । स च न परमाणुः शरीरव्यापिसुखाद्यनुपलब्धिप्रसङ्गात् । न मध्यमपरिमाणः । तथा सत्यनित्यत्वप्रसङ्गेन कृतनाशाकृताभ्यागमप्रसङ्गात् । तस्मान्नित्यो विभुर्जीवः ॥

न्या. बो.—आत्मानं निरूपयति—**ज्ञानाधिकरणमिति** । अधिकरणपदं समवायेन ज्ञानाश्रयत्वलाभार्थम् ॥

[१८]

सुखाद्युपलब्धिसाधनमिन्द्रियं मनः । तच्च प्रत्यात्मनियतत्वादनन्तं परमाणुरूपं[2] नित्यं च ॥

त. दी.—मनसो लक्षणमाह—**सुखेति** । स्पर्शरहितत्वे सति क्रियावत्त्वं मनसो लक्षणम् । मनो विभजते—**तच्चेति** । एकैकस्यात्मन एकैकं मन इत्यात्मनामनेकत्वान्मनसोऽप्यनेकत्वमित्यर्थः । **परमाणुरूपमिति** । मध्यमपरिमाणत्वेऽनित्यत्वप्रसङ्गादित्यर्थः । ननु मनो नाणु किन्तु विभु, स्पर्शरहितद्रव्यत्वादाकाशवदिति चेन्न । मनसो विभुत्व आत्ममनःसंयोगस्यासमवायिकारणस्याभावाज्ज्ञानानुत्पत्तिप्रसङ्गात् । न च विभुद्वयसंयोगोऽस्त्विति वाच्यम् । तत्संयोगस्य नित्यत्वेन सुषुप्त्यभावप्रसङ्गात् । पुरितद्व्यतिरिक्तप्रदेश आत्ममनःसंयोगस्य सर्वदा

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1 A B insert दुःख after सुख quite unnecessarily. | 2 E H read अणुरूपं.

विद्यमानत्वात् । अणुत्वे तु यदा मनः पुरीतति नाड्यां प्रविशति तदा सुषुप्तिः । यदा निःसरति तदा ज्ञानोत्पत्तिरित्यणुत्वसिद्धिः ॥

न्या. बो.—मनो निरूपयति **सुखादी**ति । **उपलब्धि**र्नाम साक्षात्कारः । तथा च सुखादिसाक्षात्कारकारणत्वे सतीन्द्रियत्वं मनसो लक्षणम् । इन्द्रियत्वमात्रोक्तौ चक्षुरादावतिव्याप्तिरतः पूर्वदलम् । विशेष्यानुपादान आत्मन्यतिव्याप्तिरात्मनो ज्ञानादिकं प्रति समवायिकारणत्वात् । अत इन्द्रियत्वोपादानम् ॥

[१९]

चक्षुर्मात्रग्राह्यो गुणो रूपम् । तच्च शुक्लनीलपीतरक्तहरितकपिशचित्रभेदात्सप्तविधं पृथिवीजलतेजोवृत्ति । तत्र पृथिव्यां सप्तविधम् । अभास्वरशुक्लं जले । भास्वरशुक्लं तेजसि[1] ॥

त. दी.—रूपं लक्षयति—**चक्षुरि**ति । संख्यादावतिव्याप्तिवारणाय मात्रपदम् । रूपत्वेऽतिव्याप्तिवारणाय गुणपदम् । प्रभाभित्तिसंयोगेऽतिव्याप्तिवारणाय चक्षुर्मात्रग्राह्यजातिमत्त्वं वाच्यम् । रूपं विभजते—**तच्चे**ति ॥ नन्वव्याप्यवृत्तिनीलादिसमुदाय एव चित्ररूपमिति चेन्न । रूपस्य व्याप्यवृत्तित्वनियमात् । ननु चित्रपटेऽवयवरूपस्य प्रतीतिरस्त्विति चेन्न । रूपरहितत्वेन पटस्याप्रत्यक्षत्वप्रसङ्गात् । न च रूपवत्समवेतत्वं प्रत्यक्षत्वप्रयोजकं गौरवात् । तस्मात्पटस्य प्रत्यक्षत्वानुपपत्त्या चित्ररूपसिद्धिः ॥ रूपस्याश्रयमाह—**पृथिवी**ति । आश्रयं विभज्य दर्शयति—**तत्रे**ति ॥

1 A, B, X read अभास्वरं शुक्लं and भास्वरं शुक्लं च respectively; J, K, have the same as A without the last च; E, G, H have शुक्लं भास्वरं. The reading adopted in the text is that of C, D, and Sc., and is preferred as making the sense clearer. अभास्वर and भास्वर, when prefixed to शुक्ल, serve to distinguish the particular kind of शुक्लरूप of जल from that of तेजस्; while, taken separately, they can give proper sense only if construed as adverbs modifying शुक्लं.

2 N has विशेष्यपदं द्वयं for चक्षुर्मात्रग्राह्यजातिमत्त्वं वाच्यम्. C, Y, Z omit the sentence प्रभाभित्ति &c.; while A omits the next sentence रूपं &c. G, L, M, P and W. omit both sentences.

न्या. बो.—रूपं लक्षयति—**चक्षुर्मात्रे**ति। चक्षुर्मात्रग्राह्यत्वविशिष्टगुणत्वं रूपस्य लक्षणम्। विशेष्यमात्रोपादाने रसादावतिव्याप्तिः। अत**श्चक्षुर्मात्रग्राह्ये**ति। तावन्मात्रोपादाने रूपत्वेऽतिव्याप्तिः। यो गुणो यदिन्द्रियग्राह्यस्तन्निष्ठा जातिस्तदभावस्तदिन्द्रियग्राह्य इति नियमात्। तद्वारणाय विशेष्योपादानम्। चक्षुर्मात्रग्राह्यत्वं नाम चक्षुर्भिन्नेन्द्रियाग्राह्यत्वे सति चक्षुर्ग्राह्यत्वम्। मात्रपदानुपादाने संख्यादिसामान्यगुणेऽतिव्याप्तिः संख्यादावपि चक्षुर्ग्राह्यत्वविशिष्टगुणत्वस्य सत्त्वात्। अतस्तद्वारणाय **मात्र**पदम्। संख्यादेश्चक्षुर्भिन्नत्वगिन्द्रियग्राह्यत्वाच्चक्षुर्मात्रग्राह्यत्वं नास्ति। अतीन्द्रिये गुरुत्वादावतिव्याप्तिवारणाय चक्षुर्ग्राह्येति। अत्र लक्षणे ग्राह्यत्वं नाम लौकिकप्रत्यक्षाविषयत्वम्। अग्राह्यत्वं नाम तदविषयत्वम्। तथा च चक्षुर्भिन्नेन्द्रियजन्यत्वाचसाक्षात्काराविषयत्वे सति चक्षुर्जन्यचाक्षुषप्रत्यक्षविषयत्वमिति फलितार्थः। ननु प्रभाभित्तिसंयोगे रूपलक्षणस्यातिव्याप्तिस्तस्य चक्षुर्मात्रग्राह्यगुणत्वादिति चेन्न। गुणपदस्य विशेषगुणपरत्वात्। न चैवं विशेषगुणघटितलक्षणे संख्यादावतिव्याप्त्यभावान्मात्रपदवैयर्थ्यमिति वाच्यम्। जलमात्रवृत्तिसांसिद्धिकद्रवत्वेऽतिव्याप्तिवारणाय तदुपादानात्॥ अथवा चक्षुर्मात्रग्राह्यजातिमद्गुणत्वस्य लक्षणत्वान्न प्रभाभित्तिसंयोगादावतिव्याप्तिः संयोगत्वजातेश्चक्षुर्मात्रग्राह्यत्वाभावाद्घटपटसंयोगस्य त्वगिन्द्रियग्राह्यत्वात्तद्गतजातेरपि त्वगिन्द्रियग्राह्यत्वात्। अत्र जातिघटितलक्षणे गुणत्वानुपादाने चक्षुर्मात्रग्राह्यजातिमति सुवर्णादावतिव्याप्तिः। अतस्तद्वारणाय तदुपादानम्॥ एवं रसादिलक्षणे विशेषणानुपादाने लक्ष्यभिन्नगुणादावतिव्याप्तिः। विशेष्यानुपादाने लक्ष्यमात्रवृत्तिरसत्वगन्धत्वादावतिव्याप्तिः। अतो विशेषणविशेष्ययोरुभयोरुपादानम्॥

[२०]

रसनग्राह्यो गुणो रसः। स च मधुराम्ललवणकटुकषायतिक्तभेदात्षड्विधः। पृथिवीजलवृत्तिः। पृथिव्यां षड्विधः। जले मधुर एव॥

त. दी.—रसं लक्षयति—**रसने**ति। रसत्वेऽतिव्याप्तिपरिहाराय

गुणपदम् । रसस्याश्रयमाह—**पृथिवी**ति ॥ आश्रयं विभज्य दर्शयति—**पृथिव्या**मिति ॥

[२१]

घ्राणग्राह्यो गुणो गन्धः । स च द्विविधः सुरभिरसुरभिश्च । पृथिवीमात्रवृत्तिः ॥

त. दी.—गन्धं लक्षयति—**घ्राणे**ति । गन्धत्वेऽतिव्याप्तिवारणाय **गुण**पदम् ॥

[२२]

त्वगिन्द्रियमात्रग्राह्यो गुणः स्पर्शः । स च त्रिविधः । शीतोष्णानुष्णशीतभेदात् पृथिव्यप्तेजोवायुवृत्तिः । तत्र शीतो जले । उष्णस्तेजसि । अनुष्णाशीतः पृथिवीवाय्वोः ॥

त. दी.—स्पर्शं लक्षयति—**त्वगि**ति । स्पर्शत्वेऽतिव्याप्तिवारणाय गुणपदम् । संयोगादावतिव्याप्तिवारणाय मात्रपदम् ॥

न्या. बो.—स्पर्शं लक्षयति—**त्वगिन्द्रियमात्रग्राह्य** इति । अत्रापि **मात्र**पदं संख्यादिसामान्यगुणादावतिव्याप्तिवारणाय[1] । अन्यविशेषणकृत्यं पूर्ववद्बोध्यम् ॥ ग्राह्यत्वपदार्थोऽपि पूर्ववत्प्रत्यक्षविषयत्वरूप एव बोध्यः ॥

[२३]

रूपादिचतुष्टयं पृथिव्यां पाकजमनित्यं च । अन्यत्रापाकजं नित्यमनित्यं च । नित्यगतं नित्यम् । अनित्यगतमनित्यम् ॥

त. दी.—**पाकज**मिति । पाकस्तेजःसंयोगः । तेन पूर्वरूपं नश्यति रूपान्तरमुत्पद्यत इत्यर्थः । अत्र परमाणुष्वेव पाको न द्व्यणुकादौ । आमपाकनिक्षिप्ते[2] घटे परमाणुषु रूपान्तरोत्पत्तौ श्यामघटनाशे पुनर्द्व्यणु-

1 V reads संख्यादावतिव्याप्ति which is perhaps preferable.

2 N Z and *Nil.* omit पाक. Other readings are आपाक and अपाक; but all are equally unsatisfactory. The one adopted in the text may mean a furnace if interpreted as a *Bahuvrihi* compound आमस्य (घटस्य) पाको यस्मिन्.

कादिक्रमेण रक्तघटोत्पत्तिः। तत्र परमाणवः समवायिकारणम्। तेजः-संयोगोऽसमवायिकारणम्। अदृष्टादिकं निमित्तकारणम्। द्व्यणुकादिरूपे कारणरूपमसमवायिकारणम् इति पीलुपाकवादिनो वैशेषिकाः। पूर्वघटस्य नाशं विनैवावयविन्यवयवेषु परमाणुपर्यन्तेषु च युगपद्रूपान्तरोत्पत्तिरिति पिठरपाकवादिनो नैयायिकाः। अत एव पार्थिवपरमाणुषु रूपादिकमनित्य-मित्यर्थः॥ **अन्यत्रे**ति। जलादावित्यर्थः। **नित्यगतमि**ति। परमाणुगत-मित्यर्थः॥ **अनित्यगतमि**ति। द्व्यणुकादिनिष्ठमित्यर्थः। रूपादिचतुष्टय-मुद्भूतं प्रत्यक्षमनुद्भूतमप्रत्यक्षम्। उद्भूतत्वं प्रत्यक्षप्रयोजको धर्मः। तद्-भावोऽनुद्भूतत्वम्॥

न्या. बो.—रूपादिचतुष्टयं पृथिव्यां पाकजमिति। एतत्तत्त्व-निर्णयश्चेत्थम्। पाको नाम विजातीयतेजःसंयोगः। स च नानाजा-तीयः। रूपजनको विजातीयः संयोगस्तदपेक्षया रसजनको विजा-तीयः। एवं स्पर्शादावपि। एवंप्रकारेण भिन्नभिन्नजातीयाः पाकाः कार्यवैलक्षण्येन कल्पनीयाः। तथाहि तृणपुञ्जनिक्षिप्त आम्रादौ उष्मलक्षणविजातीयतेजःसंयोगात्पूर्वहरितरूपनाशे रूपान्तरस्य पीता-देरुत्पत्तिः पूर्वरसस्याम्लस्यैवानुभवात्। क्वचित्पूर्वहरितरूपसत्त्वेऽपि रसपरावृत्तिर्दृश्यते विजातीयतेजःसंयोगरूपपाकवशात्पूर्वतनाम्लरसनाशे मधुररसस्यानुभवात्। तस्माद्रूपजनकापेक्षया रसजनको विलक्षणः। एवं गन्धजनको विलक्षण एवाङ्गीकार्यो रूपरसयोरपरावृत्तावपि पूर्व-गन्धनाशे विजातीयतेजःसंयोगेन सुरभिगन्धोपलब्धेः। एवं स्पर्श-जनकोऽपि पाकवशात्कठिनस्पर्शनाशे मृदुस्पर्शानुभवात्। तस्माद्रूपादि-जनका विजातीया एव पाका यथाकार्यमुन्नेयाः। अतएव पार्थिवपरमा-णूनामेकजातीयत्वेऽपि पाकमहिम्ना विजातीयद्रव्यान्तरानुभवः। यथा गोभुक्ततृणादिनामापरमाण्वन्तं भङ्गे तृणारम्भकपरमाणुषु विजातीयतेजः-संयोगवशात्पूर्वरूपादिचतुष्टयनाशे तदनन्तरं दुग्धे यादृशं रूपादिकं वर्तते तादृशरूपरसगन्धस्पर्शजनकास्तेजःसंयोगा जायन्ते। तदुत्तरं तादृशरूपरसादय उत्पद्यन्ते। तादृशरूपादिविशिष्टपरमाणुभिर्दुग्धद्व्यणुक-मारभ्यते। ततस्त्र्यणुकादिक्रमेण महादुग्धारम्भः॥ एवं महादुग्धारम्भकैः

परमाणुभिरेव द्व्यणुकारभ्यते । एवं पाकभद्भिरेव द्व्यणुकारम्भकैः परमाणुभिर्नवनीतारम्भ इति दिक् ॥

[२४]

एकत्वादिव्यवहारहेतुः संख्या । नवद्रव्यवृत्तिरेकत्वादिपरार्धपर्यन्ता । एकत्वं नित्यमनित्यं च । नित्यगतं नित्यमनित्यगतमनित्यम् । द्वित्वादिकं तु सर्वत्रानित्यमेव ॥

त. दी.—संख्यां लक्षयति—**एकत्वेति** ॥

[२५]

मानव्यवहारकारणं परिमाणं । नवद्रव्यवृत्ति । तच्चतुर्विधम् अणु महद्दीर्घं ह्रस्वं चेति ॥

त. दी.—परिमाणं लक्षयति—**मानेति** । परिमाणं विभजते—**तादिति** । भावप्रधानो निर्देशः । अणुत्वं महत्त्वं दीर्घत्वं ह्रस्वत्वं चेत्यर्थः ॥

[२६]

पृथग्व्यवहारकारणं पृथक्त्वं । सर्वद्रव्यवृत्ति ॥

त. दी.—पृथक्त्वं लक्षयति—**पृथगिति** । इदमस्मात्पृथगिति व्यवहारकारणमित्यर्थः ॥

[२७]

संयुक्तव्यवहारहेतुः संयोगः । सर्वद्रव्यवृत्तिः ॥

त. दी.—संयोगं लक्षयति—**संयुक्तेति** । इमौ संयुक्ताविति व्यवहा-

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1 A B C insert असाधारण between व्यवहार and हेतु here and in the following definitions of परिमाण, पृथक्त्व and संयोग, but the reading of the majority of copies is preferred. See Note *loc. cit.*

2 A B insert सा before नवद्रव्यवृत्तिः.

3 C E K X omit नित्यमनित्यं च.

रहेतुरित्यर्थः । संख्यादिलक्षणेषु सर्वत्र दिक्कालादावतिव्याप्तिवारणायासाधारणेति पदं देयम् ॥ संयोगो द्विविधः कर्मजः संयोगजश्च । आद्यो हस्तक्रियया हस्तपुस्तकसंयोगः । द्वितीयो हस्तपुस्तकसंयोगात्कायपुस्तकसंयोगः । अव्याप्यवृत्तिः संयोगः । स्वात्यन्ताभावसमानाधिकरणत्वमव्याप्यवृत्तित्वम् ॥

[२८]

संयोगनाशको गुणो विभागः । सर्वद्रव्यवृत्तिः ॥

त. दी.—विभागं लक्षयति—**संयोगे**ति । कालादावतिव्याप्तिवारणाय **गुण** इति । रूपादावतिव्याप्तिवारणाय **संयोगनाशक** इति । विभागोऽपि द्विविधः कर्मजो विभागजश्च । आद्यो हस्तक्रियया हस्तपुस्तकविभागः । द्वितीयो हस्तपुस्तकविभागात्कायपुस्तकविभागः ॥

न्या. बो.—विभागं लक्षयति—**संयोगे**ति । संयोगनाशकत्वविशिष्टगुणत्वं विभागस्य लक्षणम् । विशेषणमात्रोपादाने क्रियाया अपि संयोगनाशकत्वात्तत्रातिव्याप्तिवारणाय गुणत्वं विशेष्यम् ॥

[२९]

परापरव्यवहारासाधारणकारणे परत्वापरत्वे । पृथिव्यादिचतुष्टयमनोवृत्तिनी । ते द्विविधे दिक्कृते कालकृते च । दूरस्थे दिक्कृतं परत्वम् । समीपस्थे दिक्कृतमपरत्वम् । ज्येष्ठे कालकृतं परत्वम् । कनिष्ठे कालकृतमपरत्वम् ॥

त. दी.—परत्वापरत्वयोर्लक्षणमाह—**परे**ति । परव्यवहारासाधारणकारणं परत्वम् । अपरव्यवहारासाधारणकारणमपरत्वमित्यर्थः । परापरत्वे विभजते—**ते द्विविधे** इति । दिक्कृतयोरुदाहरणमाह—**दूरस्थ** इति ॥ कालकृते उदाहरति— **ज्येष्ठ** इति ॥

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1 H J omit असाधारण, but most of the copies agree in retaining it.

2 E G H J and X omit पृथिव्यादि etc.

[३०]

आद्यपतनासमवायिकारणं गुरुत्वं । पृथिवीजलवृत्ति ॥

त. दी.—गुरुत्वं लक्षयति—**आद्ये**ति । द्वितीयादिपतनस्य वेगासमवायिकारणत्वाद्वेगेऽतिव्याप्तिवारणा**याद्ये**ति ॥

न्या. बो.—गुरुत्वं लक्षयति—**आद्ये**ति । द्वितीयादिपतनक्रियायां वेगस्यैवासमवायिकारणत्वात्तत्रातिव्याप्तिवारणा**याद्ये**ति । उत्तरत्र स्यन्दन **आद्य**विशेषणमपि पूर्ववदेव योजनीयम् ॥

[३१]

आद्यस्यन्दनासमवायिकारणं द्रवत्वं । पृथिव्यप्तेजोवृत्ति । तद्द्विविधं सांसिद्धिकं नैमित्तिकं च । सांसिद्धिकं जले नैमित्तिकं पृथिवीतेजसोः । पृथिव्यां घृतादावग्निसंयोगजन्यं[1] द्रवत्वम् । तेजसि सुवर्णादौ[2] ॥

त. दी.—द्रवत्वं लक्षयति—**आद्यस्यन्दने**ति । स्यंदनं स्रवणम् । तेजःसंयोगजन्यं नैमित्तिकद्रवत्वम्[3] । तद्भिन्नं सांसिद्धिकद्रवत्वम् । पृथिव्यां नैमित्तिकद्रवत्वमुदाहरति— **घृतादा**विति । तेजसि तदाह— **सुवर्णादा**विति ॥

[३२]

चूर्णादिपिण्डीभावहेतुर्गुणः स्नेहः । जलमात्रवृत्तिः ॥

त. दी.—स्नेहं लक्षयति—**चूर्णे**ति । कालादावतिव्याप्तिवारणाय **गुण** इति । रूपादावतिव्याप्तिवारणाय **चूर्णादी**ति[4] ॥

न्या. बो.—स्नेहं लक्षयति— **चूर्णादी**ति । चूर्णादिपिण्डीभावहेतुत्वे सति गुणत्वं स्नेहस्य लक्षणम् । पिण्डीभावो नाम चूर्णादेर्धारणाकर्षणहेतुभूतो विलक्षणः संयोगः । तादृशसंयोगे स्नेहस्यैवासाधारणकारणत्वम् । न

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1 C D E J read °संयोगजं.
2 B omits तेजसि सुवर्णादौ.
3 G J Y Z omit द्रवत्व after नैमित्तिक.
4 A G J Y Z read पिण्डीभावेति; A has गुण for रूप wrongly.

तु जलादिगतद्रवत्वस्य । तथा सति द्रुतसुवर्णादिसंयोगे चूर्णादेः पिण्डीभावापत्तेः । अतः स्नेह एवासाधारणकारणम् । विशेषणमात्रोपादाने कालादावतिव्याप्तिस्तद्वारणाय विशेष्योपादानम् । वस्तुतस्तु द्रुतजलसंयोगस्यैव पिण्डीभावहेतुत्वम् । स्नेहस्य पिण्डीभावहेतुत्वे मानाभावात् । जले द्रुतत्वविशेषणात्कारकादिव्यावृत्तिः ॥

[३३]

श्रोत्रग्राह्यो गुणः शब्दः । आकाशमात्रवृत्तिः । स द्विविधो ध्वन्यात्मको वर्णात्मकश्चेति । ध्वन्यात्मको भेर्यादौ । वर्णात्मकः संस्कृतभाषादिरूपः ॥

त. दी.—शब्दं लक्षयति—**श्रोत्रेति** । शब्दत्वेऽतिव्याप्तिवारणाय **गुण** इति । रूपादावतिव्याप्तिवारणाय **श्रोत्रेति** ॥ शब्दस्त्रिविधः । संयोगजो विभागजः शब्दजश्चेति । तत्राद्यो भेरीदण्डसंयोगजन्यः । द्वितीयो वंश उत्पाट्यमाने दलद्वयविभागजन्यश्चटचटाशब्दः । भेर्यादिदेशमारभ्य श्रोत्रपर्यन्तं द्वितीयादिशब्दाः शब्दजाः ॥

न्या. बो.—शब्दं लक्षयति—**श्रोत्रेति** । शब्दत्वेऽतिव्याप्तिवारणाय गुणपदम् । रूपादावतिव्याप्तिवारणाय **श्रोत्रेति** । स त्रिविधः । संयोगजो विभागजः शब्दजश्चेति । भेरीदण्डसंयोगजन्यो भाङ्कारादिशब्दः । हस्ताभिघातसंयोगजन्यो मृदङ्गादिशब्दः । वंशे पाट्यमाने दलद्वयविभागजश्चटचटादिशब्दः । शब्दोत्पत्तिदेशमारभ्य कर्णविवरपर्यन्तं वीचीतरङ्गन्यायेन कदम्बमुकुलन्यायेन वा निमित्तपवनेन शब्दधारा जायन्ते । तत्रोत्तरशब्दे पूर्वशब्दः[1] कारणम् ॥

[३४]

सर्व[2]व्यवहारहेतुर्बुद्धिर्ज्ञानम् । सा द्विविधा स्मृतिरनुभवश्च ।

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1 V has उत्तरोत्तरशब्दे पूर्वपूर्वशब्दः
2 O K add गुणः after हेतुः A E G X read °हेतुर्ज्ञानं बुद्धिः. See Note *loc. cit.*

संस्कारमा[1]त्रजन्यं ज्ञानं स्मृतिः । तद्भिन्नं ज्ञानमनुभवः ।

त. दी.—बुद्धेर्लक्षणमाह—**सर्वे**ति ।[2] ज्ञानामीत्यनुव्यवसायगम्यज्ञानत्वमेव लक्षणमित्यर्थः । बुद्धिं विभजते—**से**ति ॥ स्मृतेर्लक्षणमाह—**संस्कारे**ति । भावनाख्यः संस्कारः । संस्कारध्वंसेऽतिव्याप्तिवारणाय **ज्ञानमि**ति । घटादिप्रत्यक्षेऽतिव्याप्तिवारणाय **संस्कारजन्यामि**ति । प्रत्याभिज्ञायामतिव्याप्तिवारणाय **मात्रे**ति[3] ॥ अनुभवं लक्षयति—**तद्भिन्नमि**ति । स्मृतिभिन्नं ज्ञानमनुभव इत्यर्थः ॥

न्या. बो.—बुद्धेर्लक्षणमाह—**सर्वे**ति । व्यवहारः शब्दप्रयोगः । ज्ञानं विना शब्दप्रयोगासंभवाच्छब्दप्रयोगरूपव्यवहारहेतुत्वं बुद्धेर्लक्षणम्[4] । बुद्धिं विभजते—**सा द्विविधे**ति ॥ स्मृतिं लक्षयति—**संस्कारे**ति । बहिरिन्द्रियाजन्यत्वविशिष्ट[5]संस्कारजन्यत्वविशिष्टज्ञानत्वं स्मृतेर्लक्षणम् । विशेषणानुपादाने प्रत्यक्षाद्यनुभवेऽतिव्याप्तिः । तद्वारणाय विशेषणोपादानम् । संस्कारध्वंसेऽतिव्याप्तिवारणाय विशेष्योपादानम् । ध्वंसं प्रति प्रतियोगिनः कारणत्वात्संस्कारध्वंसेऽपि संस्कारजन्यत्वस्य सत्वात् । प्रत्यभिज्ञायामतिव्याप्तिवारणाय **मात्र**पदम् ॥ अनुभवं लक्षयति— **तद्भिन्न**मिति । तद्भिन्नत्वं नाम स्मृतिभिन्नत्वम् । स्मृतिभिन्नत्वविशिष्टज्ञानत्वमनुभवस्य लक्षणम् तत्र विशेषणानुपादाने स्मृतावतिव्याप्तिः । विशेष्यानुपादाने घटादावतिव्याप्तिः । अतस्तद्वारणाय विशेषणविशेष्ययोरुभयोरुपादानम् ॥

1 J omits मात्र, while the word and the commentary on it are added in G in a marginal note. Sc. also notices the omission of the word in several MSS., while the absence of the sentence referring to it in several copies of TD makes it probable that the word may not have existed originally. It is however retained in accordance with *Nil*. See Note on मात्र *loc. cit.*

2 N and Q add कालादावतिव्याप्तिवारणाय ज्ञानमिति । रूपादावतिव्याप्तिवारणाय सर्वव्यवहारेति while Q has गुण for ज्ञान; but the passage is not found anywhere else, nor noticed by *Nil.*

3 A C J L P Y Z omit this sentence, and G adds it in the margin; but it is retained on the authority of M N Q W and *Nil.*

4 All copies except V read ज्ञानस्य.

5 C K R omit बहिरिन्द्रियाजन्यत्वविशिष्ट.

[३५]

स द्विविधो यथार्थोऽयथार्थश्च । तद्वति तत्प्रकारकोऽनुभवो यथार्थः यथा रजत इदं रजतमिति ज्ञानम्[1] । स[2] एव प्रमेत्युच्यते । तदभाववति तत्[3]प्रकारकोऽनुभवोऽयथार्थः । [4]यथा शुक्ताविदं रजतमिति ज्ञानम् ॥

त. दी.—अनुभवं विभजते—**स द्विविध** इति । यथार्थानुभवस्य लक्षणमाह—**तद्वती**ति । ननु घटे घटत्वमिति प्रमायामव्याप्तिः घटत्वे घटाभावादिति चेन्न । यत्र यत्संबंधोऽस्तितत्र तत्संबंधानुभव इत्यर्थाद्घटत्वेऽपि घटसंबन्धोऽस्तीति नाव्याप्तिः । **स** इति । यथार्थानुभव एव शास्त्रे प्रमेत्युच्यत इत्यर्थः । अयथार्थं लक्षयति—**तदभाववती**ति । नन्विदं संयोगीति प्रमायामतिव्याप्तिरिति चेन्न । यदवच्छेदेन यत्संबन्धाभाव[5]स्तदवच्छेदेन तत्संबंधज्ञानस्य विवक्षितत्वात् संयोगाभावावच्छेदेन संयोगज्ञानस्य भ्रमत्वात्, संयोगावच्छेदेन संयोगसंबन्धस्य स[6]त्त्वात्, नातिव्याप्तिः ॥

न्या बो.—अनुभवं विभजते—**स द्विविध** इति । यथार्थानुभवं लक्षयति—**तद्वती**ति । तद्वतीत्यत्र सप्तम्यर्थो विशेष्यकत्वम् । तच्छब्देन [7]प्रकारीभूतो धर्मो धर्तव्यः। तथाच तद्वद्विशेष्यकत्वे सति तत्प्रकारकत्वं [8]यथार्थानुभवस्य लक्षणम् । उदाहरणं । रजत इदं रजतमिति ज्ञानम् । रजतत्व-

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1 C H J K omit this sentence; E G Q X have instead यथार्थं घट इति: B adds सत्य before रजत;

2 The reading in all copies of T. S. and T. D. except J is सैव; but स एव is adopted as being grammatically more correct.

3 Q. omits अनुभवः while C E have तत्प्रकारकश्च.

4 C H J F and Q. omit this sentence. D adds further रजतत्वाभाववति शुक्तौ रजतत्वप्रकारकज्ञानमयथार्थज्ञानं; but this as well as A's addition सैवाप्रमेत्युच्यते seem to be interpolations.

5 G reads यदभावः for यत्संबन्धाभावः.

6 A has संयोगज्ञानस्य प्रमात्वात् for संयोगसंबन्धस्य सत्त्वात्; J reads विद्यमानत्वात् for सत्त्वात्.

7 V adds ज्ञान before प्रकारीभूतः, perhaps better.

8 S T and W. read तत्प्रकारत्वे सत्यनुभवत्वं, perhaps better.

वद्विशेष्यकत्वे सति रजतत्वप्रकारकं ज्ञानम्। तद्वन्निष्ठविशेष्यतानिरूपित-तन्निष्ठप्रकारिताशालित्वमिति निष्कर्षः । अन्यथा यथाश्रुते रङ्गरजतयोरिमे रजतरङ्गे इत्याकारकसमूहालम्बनभ्रमेऽतिव्याप्तिः। तत्रापि रजतत्ववद्विशेष्यकत्वरजतत्वप्रकारकत्वयोः, रङ्गत्ववद्विशेष्यकत्वरङ्गत्व-प्रकारकत्वयोश्च सत्त्वात्। उक्तनिष्कर्षे तु दर्शितभ्रमे नातिव्याप्तिः। रज-तत्वप्रकारताया रजतत्ववद्रजतविशेष्यतानिरूपितत्वाभावात्, एवं रङ्गत्वप्र-कारताया रङ्गत्ववद्रङ्गविशेष्यतानिरूपितत्वाभावाच्च । किंतु समूहालम्बने भ्रमस्य रङ्गांशे रजतत्वावगाहित्वेन रजतांशे रङ्गत्वावगाहित्वेन च रजत-त्वप्रकारतायाः रङ्गत्ववद्विशेष्यतानिरूपितत्वात् । एवं रजतांशे रङ्गत्व-प्रकारताया रजतत्ववद्विशेष्यतानिरूपितत्वाच्चेति[1] ॥

अयथार्थानुभवं लक्षयति—**तदभाववती**ति । अत्रापि पूर्व-वत्तदभाववद्विशेष्यतानिरूपिततन्निष्ठप्रकारताशालिज्ञानत्वं विवक्षणीयम् । अन्यथा रङ्गरजतयोरिमे रङ्गरजते इत्याकारकसमूहालम्बनप्रमायामति-व्याप्तिरेतत्समूहालम्बनस्य रजतरङ्गोभयविशेष्यकत्वेन रजतत्वरङ्गत्वो-भयप्रकारकत्वेन च रजतत्वाभाववद्रङ्गविशेष्यकत्वरजतत्वप्रकारकत्वयोः, रङ्गत्वाभाववद्रजतविशेषकत्वरङ्गत्वप्रकारकत्वयोश्च सत्त्वात् । उक्तनि-ष्कर्षे तु न तत्रातिव्याप्तिः। तादृशप्रमायाः[2] रजतांशे रजतत्वावगाहित्वेन रङ्गांशे रङ्गत्वावगाहित्वेन च रजतत्वप्रकारताया रजतत्वाभाववद्रङ्ग-निष्ठविशेष्यतानिरूपितत्वाभावादेवं रङ्गत्वप्रकारताया रङ्गत्वाभाववद्रजत-निष्ठविशेष्यतानिरूपितत्वाभावाच्च । उदाहरणं। **यथा शुक्ता**विति ॥

[३६]

यथार्थानुभवश्चतुर्विधः प्रत्यक्षानुमित्युपमितिशाब्दभेदात् । त-त्करणमपि चतुर्विधं प्रत्यक्षानुमानोपमानशब्दभेदात् ॥

त. दी.—यथार्थानुभवं विभजते—**यथार्थे**ति। प्रसङ्गात्प्रमाकरणं विभजते—**तत्करण**मिति । प्रमाकरणमित्यर्थः। प्रमायाः करणं प्रमाण-मिति प्रमाणसामान्यलक्षणम् ॥

1 W. reads differently; U adds नानाद्रव्यविशेष्यताशालिज्ञानं समूहालंबनं.
2 The reading is taken from W.

न्या. बो.—यथार्थानुभवं विभजते—**यथार्थानुभव** इति। **तत्करणमिति**। फलीभूतप्रत्यक्षादिकरणं चतुर्विधमित्यर्थः। प्रत्यक्षादिचतुर्विधप्रमाणानां प्रमाकरणत्वं सामान्यलक्षणम्। एकैकप्रमाणलक्षणं तु वक्ष्यते प्रत्यक्षज्ञानेत्यादिना॥

[३७]

असाधारणं कारणं करणम्[1]।

त. दी.—करणलक्षणमाह—**असाधारणे**ति। साधारणकारणे दिक्कालादावतिव्याप्तिवारणायासाधारणेति॥

न्या. बो.—करणलक्षणमाह—**असाधारणमि**ति। व्यापारवदसाधारणं कारणं करणमित्यर्थः। असाधारणकारणत्वं च कार्यत्वव्याप्य[3]धर्मावच्छिन्नकार्यतानिरूपितकारणताशालित्वम्। यथा दण्डादेर्घटादिकं प्रत्यसाधारणकारणत्वम्। कार्यत्वव्याप्यधर्मो घटत्वादिरूपधर्मः तदवच्छिन्नकार्यता घटे। तन्निरूपितकारणता दण्डे। अतो घटं प्रति दण्डोऽसाधारणकारणम्। भ्रम्यादिरूपव्यापारवत्त्वाच्च करणम्। साधारणकारणत्वं कार्यत्वावच्छिन्नकार्यतानिरूपितकारणताशालित्वम्। यथा ईश्वरादृष्टादेः कार्यत्वावच्छिन्नं प्रत्येव कारणत्वात्साधारणकारणत्वम्॥

[३८]

कार्यनियतपूर्ववृत्ति[4] कारणम्।

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1 All copies except B and K insert व्यापारवत् before असाधारण; in J the word is added in margin, apparently by another hand. But the प्रतीक in all copies of TD and the remarks of Sc. conclusively show that it did not exist originally. On this see Note *loc. cit.* G adds तज्जन्यत्वे सति तज्जन्यजनको व्यापारः, but the addition is unwarranted.

2 N here inserts चक्षुषा घटप्रत्यक्षे जननीये चक्षुःसंयोगरूपो व्यापारः। तत्रातिव्याप्तिवारणाय व्यापारवादित्यपि देयम्. Y adds घटं प्रति कपालद्वयसंयोगवारणाय व्यापारवदिति; but neither passage is found in any other copy.

3 U and W have अतिरिक्त for व्याप्य.

4 The reading in the text is taken from G K Q X, as being most probably the correct one. A B C D F prefix अनन्यथासिद्ध to कार्यनियत°. J adds the word in margin. E has अनन्यथासिद्धत्वे सति नियत°, while H reads कार्येऽन्यथासिद्धिशून्यत्वे सति नियत°. See Note *loc. cit.*

त. दी.—कारणलक्षणमाह—**कार्येति**। पूर्ववृत्ति कारणमित्युक्ते रासभादावतिव्याप्तिः स्यादतो **नियतेति**। तावन्मात्रे कृते कार्येऽतिव्याप्तिरतः **पूर्ववृत्तीति** ॥ ननु तन्तुरूपमपि पटं प्रति कारणं स्यादिति चेन्न। अनन्यथासिद्धत्वे सतीति विशेषणात्। अनन्यथासिद्धत्वमन्यथासिद्धिविरहः। अन्यथासिद्धिश्च त्रिविधा। येन सहैव यस्य यं प्रति पूर्ववृत्तित्वमवगम्यते तं प्रति तेन तदन्यथासिद्धम्। यथा तन्तुना तन्तुरूपं तन्तुत्वं च पटं प्रति। अन्यं प्रति पूर्ववृत्तित्वे ज्ञात एव यस्य यं प्रति पूर्ववृत्तित्वमवगम्यते तं प्रति तदन्यथासिद्धम्। यथा शब्दं प्रति पूर्ववृत्तित्वे ज्ञात एव घटं प्रत्याकाशस्य। अन्यत्र क्लृप्तनियतपूर्ववर्तिनैव कार्यसंभवे तत्सहभूतमन्यथासिद्धम्। यथा पाकजस्थले गन्धं प्रति रूपप्रागभावस्य। एवं चानन्यथासिद्धनियतपूर्ववृत्तित्वं कारणत्वम् ॥

न्या. बो.—कारणं लक्षयति—**कार्यनियतेति**। कार्यं प्रति नियतत्वे सति पूर्ववृत्तित्वं कारणत्वम्। नियतत्वविशेषणानुपादाने पूर्ववर्तिनो रासभादेरपि घटादिकारणत्वं स्यादतो **नियतेति** विशेषणम्। नियतपूर्ववर्तिनो दण्डरूपादेरपि घटकारणत्वं स्यादतोऽनन्यथासिद्धपदमपि कारणलक्षणे निवेशनीयं दण्डरूपादीनामन्यथासिद्धत्वात् ॥

[३९]

कार्यं प्रागभावप्रतियोगि ॥

त. दी.—कार्यलक्षणमाह—**कार्यमिति** ॥

न्या. बो. कार्यं लक्षयति—**प्रागिति**। प्रागभावप्रतियोगित्वं कार्यस्य लक्षणम्। उत्पत्तेः पूर्वमिह घटो भविष्यतीति प्रतीतिर्जायते। एतत्प्रतीतिविषयोऽभावः प्रागभावस्तत्प्रतियोगि घटादिरूपं कार्यम् ॥

[४०]

कारणं त्रिविधं समवाय्यसमवायिनिमित्तभेदात्। यत्समवेतं कार्यमुत्पद्यते तत्समवायिकारणम्। यथा तन्तवः पटस्य पटश्च स्वगतरूपादेः। कार्येण कारणेन वा सहैकस्मिन्नर्थे समवेतत्वे सति

यत्कारणं तदसमवायिकारणम्[1] । यथा तन्तुसंयोगः पटस्य तन्तुरूपं पटरूपस्य[2] । तदुभयभिन्नं कारणं निमित्तकारणम् । यथा तुरीवेमादिकं पटस्य ।

त. दी.—कारणं विभजते—**कारणमिति**। समवायिकारणस्य लक्षणमाह—**यत्समवेतमिति** । यस्मिन्समवेतमित्यर्थः । असमवायिकारणं लक्षयति—कार्येणेति । **कार्येणेत्ये**तदुदाहरति—**तन्तुसंयोग** इति । कार्येण पटेनैकस्मिंस्तन्तौ समवेतत्वात्तन्तुसंयोगः पटस्यासमवायिकारणमित्यर्थः । **कारणेन** सहेत्येतदुदाहरति—**तन्तुरूप**मिति । कारणेन पटेन सहैकस्मिंस्तन्तौ समवेतत्वात्तन्तुरूपं पटरूपस्यासमवायिकारणमित्यर्थः । निमित्तकारणं लक्षयति—**तदुभये**ति । समवाय्यसमवायिभिन्नं कारणं निमित्तकारणमित्यर्थः[3] ॥

न्या. बो.—कारणं विभजते—**कारणमिति** । समवायिकारणं लक्षयति—**यत्समवेतमिति** ॥ यस्मिन्समवेतं सत्-समवायेन संबद्धं सत् कार्यमुत्पद्यते तत्समवायिकारणमित्यर्थः । उदाहरणं—**यथा तन्तव** इति । तन्तुषु समवायेन संबद्धं सत् पटात्मकं कार्यमुत्पद्यते इति तन्तवः समवायिकारणमित्यर्थः । सामान्यलक्षणं तु समवायसंबन्धावच्छिन्नकार्यतानिरूपिततादात्म्यसंबन्धावच्छिन्नकारणत्वं समवायिकारणत्वमिति । समवायसंबन्धेन घटाधिकरणे कपालादौ कपालादेस्तादात्म्यसंबन्धेनैव सत्त्वात् । समवायसंबन्धावच्छिन्नघटत्वावच्छिन्नकार्यतानिरूपिततादात्म्यसंबन्धावच्छिन्नकारणतायाः[4] कपालादौ सत्त्वाल्लक्षणसमन्वयः । समवायेन जन्यभावत्वावच्छिन्नं प्रति तादात्म्यसंबन्धेन द्रव्यस्यैव कारणत्वाज्जन्यभावेषु

1 E and Q supply यत् and तत् which though not absolutely necessary are inserted as making the sense clearer.

2 K reads पटगतरूपस्य.

3 N here adds इदं च कारणत्रयं भावकार्यस्यैव । अभावस्य तु निमित्तमात्रम्, but the words are not found in any other copy.

4 W inserts here कपालत्वावच्छिन्न.

द्रव्यगुणकर्मसु त्रिषु द्रव्यमेव समवायिकारणम् । द्रव्ये द्रव्यावयवाः समवायिकारणम् । अतो गुणादावपि द्रव्यमेव समवायिकारणमित्याशयेनाह **पटश्च स्वगतरूपादेरि**ति । समवायिकारणमित्यनुषज्यते । असमवायिकारणं लक्षयति---**कार्येणे**ति । असमवायिकारणं द्विविधम् । कार्येण सहैकस्मिन्नर्थे समवेतं सत् कारणमसमवायिकारणमित्येकम् । कारणेन सहैकस्मिन्नर्थे समवेतं सत् कारणमसमवायिकारणमित्यपरमित्यर्थः । अत्र कारणेनेत्यस्य स्वकार्यसमवायिकारणेनेत्यर्थः । जन्यद्रव्यमात्रेऽवयवसंयोगस्यैवासमवायिकारणत्वात्पटात्मककार्ये तदवयवतन्तुसंयोगस्यैवासमवायिकारणत्वं दर्शयन्प्रथममुदाहरति---**यथा तन्तुसंयोगः पटस्ये**ति । पटात्मककार्येण सहैकस्मिन्नर्थे तन्तौ समवेतं सत् समवायसंबन्धेन वर्तमानं सत् पटात्मककार्यं प्रति तन्तुसंयोगात्मकं कारणमसमवायिकारणमित्यर्थः । द्वितीयसमवायिकारणं दर्शयति---**कारणेन सहे**त्यादिना । तदुदाहरति---**तन्तुरूपमि**ति । कारणेन पटरूपसमवायिकारणीभूतपटेन सहैकस्मिन्नर्थे तन्तुरूपेऽर्थे समवेतं सत् समवायसंबन्धेन वर्तमानं सत् तन्तुरूपं पटगतरूपं प्रति कारणं भवति । अतोऽसमवायिकारणं तन्तुरूपं पटरूपस्य । सामान्यलक्षणं तु समवायसंबन्धावच्छिन्नकार्यतानिरूपिता या समवायस्वसमवायिसमवेतत्वान्यतरसंबन्धावच्छिन्ना कारणता तदाश्रयत्वम् । समवायसंबन्धावच्छिन्ना कपालद्वयसंयोगनिष्ठा कारणता कपालद्वयसंयोगे वर्तते । एवमाद्यपतनक्रियायामाद्यस्यन्दनक्रियायां च गुरुत्वद्रवत्वे असमवायिकारणे भवतः । आद्यपतनाक्रियां प्रत्याद्यस्यन्दनक्रियां प्रति च तयोः समवायसंबन्धेनैव कारणत्वात् । अवयविगुणादौ त्ववयवगुणादेः स्वसमवायिसमवेतत्वसंबन्धेनैव कारणत्वात्तत्संबन्धावच्छिन्नकारणताश्रयत्वमवयवगुणादौ वर्तते । अवयवभूतकपालतन्तुरूपादेः स्वशब्दग्राह्यकपालरूपतन्तुरूपसमवायिक-

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1 The following two sentences are omitted in C K R.

2 W reads differently.

3 Before समवाय° S T insert द्रव्यासमवायिकारणीभूतावयवसंबन्धे तु समवायसंबन्धावच्छिन्नपट-त्वावच्छिन्नकार्यतानिरूपित°, but all other copies omit the words. S T also read संयोगत्वावच्छिन्ना for संयोगनिष्ठा. W reads differently.

पालतन्तुसमवेतत्वसंबन्धेन घटपटादौ सत्त्वात् ॥ निमित्तकारणं लक्षयति—**तदुभयभिन्नमिति** । समवाय्यसमवायिभिन्नमित्यर्थः ॥

[४१]

तदेतत्त्रिविधकारणमध्ये यदसाधारणं कारणं तदेव करणम् ॥

त. दी.—करणलक्षणमुपसंहरति—**तदेतदिति** ॥

न्या. बो.—करणलक्षणमुपसंहरति—**तदेतदिति** । यदसाधारणमित्यत्र व्यापारवत्त्वे सतीत्यपि पूरणीयम् । अन्यथा तन्तुकपालसंयोगयोरतिव्याप्तिः । तन्तुकपालसंयोगयोरपि कार्यत्वातिरिक्तपटत्वघटत्वावच्छिन्नं प्रति कारणत्वादसाधारणत्वमस्त्येव । अतस्तत्र करणत्ववारणाय व्यापारवत्त्वे सतीति करणलक्षणे विशेषणं देयम् । व्यापारत्वं तु तज्जन्यत्वे सति तज्जन्यजनकत्वम् । भवति हि दण्डजन्यत्वे सति दण्डजन्यघटजनकता भ्रम्यादेर्दण्डव्यापारस्य । एवं कपालसंयोगतन्तुसंयोगादेरपि कपालतन्त्वादिव्यापारत्वम् । कपालसंयोगस्य कपालजन्यत्वे सति कपालजन्यघटजनकत्वादेवं तन्तुसंयोगस्य तन्तुजन्यत्वे सति तन्तुजन्यपटजनकत्वात् । करणलक्षणेऽसाधारणविशेषणानुपादान ईश्वरादृष्टादेरपि व्यापारवत्त्वात्करणत्वं स्यात्तत्रातिव्याप्तिवारणायासाधारणेति ॥

[४२]

तत्र प्रत्यक्षज्ञानकरणं प्रत्यक्षम् । इन्द्रियार्थसंनिकर्षजन्यं ज्ञानं प्रत्यक्षम् । तद्द्विविधं निर्विकल्पकं सविकल्पकं चेति । तत्र निष्प्रकारकं ज्ञानं निर्विकल्पकं यथेदं किंचित् । सप्रकारकं ज्ञानं सविकल्पकं यथा डित्थोऽयं ब्राह्मणोऽयं श्यामोऽयमिति[3] ॥

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1 S T W read the passage somewhat differently, though the sense is the same; thus अवयविगुणभूतघटपटरूपादौ त्ववयवगुणभूतकपालतंतुरूपादेः स्वपदग्राह्यकपालतंतुरूपादिसमवायिकपालतंत्वादिसमवेतत्वसंबन्धेनैव कारणत्वात्तत्संबन्धावच्छिन्नकारणताश्रयत्वमवयवगुणभूतकपालरूपतंतुरूपादौ वर्तत इति लक्षणसंगतिः.

2 E instead of this has किंचिदिदमिति वस्तुमात्रावगाहिज्ञानम्; G J Q and X omit the words altogether.

3 E adds पाचकोऽयम्, but the addition though desirable as giving an instance of क्रिया is not supported by any other copy.

त. दी.—प्रत्यक्षलक्षणमाह—**तत्रेति**। प्रमाणेषु मध्य इत्यर्थः। प्रत्यक्षज्ञानस्य लक्षणमाह—**इन्द्रियेति**। इन्द्रियं चक्षुरादिकम्। अर्थो घटादिः। तयोः संनिकर्षः संयोगादिः, तज्जन्यं ज्ञानमित्यर्थः॥ तद्विभजते—**तद्द्विविधमिति**। निर्विकल्पकस्य लक्षणमाह—**निष्प्रकारकमिति** विशेषणविशेष्यसंबन्धानवगाहि ज्ञानमित्यर्थः॥ ननु निर्विकल्पके किं प्रमाणमिति चेन्न। गौरिति विशिष्टज्ञानं विशेषणज्ञानजन्यं विशिष्टज्ञानत्वाद्दण्डीति ज्ञानवदित्यनुमानस्य प्रमाणत्वात्। विशेषणज्ञानस्यापि सविकल्पकत्वेऽनवस्थाप्रसङ्गान्निर्विकल्पकसिद्धिः॥ सविकल्पकं लक्षयति—**सप्रकारकमिति**। नामजात्यादिविशेषणविशेष्यसंबन्धावगाहि ज्ञानमित्यर्थः। सविकल्पकमुदाहरति—**यथेति**॥

न्या. बो.—षड्विधेन्द्रियभूतप्रत्यक्षप्रमाणस्य लक्षणमाह—**तत्रेति**। प्रमाभूतेषु प्रत्यक्षात्मकं यज्ज्ञानं चाक्षुषादिप्रत्यक्षं तत्प्रति करणं व्यापारवदसाधारणकारणमिन्द्रियं भवति। अतः प्रत्यक्षज्ञानकरणत्वं प्रत्यक्षस्य लक्षणम्।[1] आद्यसन्निकर्षातिरिक्तचतुर्विधसन्निकर्षाणां समवायघटितत्वेनेन्द्रियजन्यत्वाभावाद्व्यापारत्वं न संभवतीतीन्द्रियमनःसंयोगस्यैव षाड्विध[2]प्रत्यक्षे जननीये इन्द्रियव्यापारता बोध्या। मानसप्रत्यक्षे त्वात्ममनःसंयोगस्यैव सा बोध्या[3]॥ प्रत्यक्षप्रमाणलक्षणमुक्त्वा प्रत्यक्षप्रमालक्षणमाह। **इन्द्रियार्थसंनिकर्षेति**। आदौ लक्षणं जन्यप्रत्यक्षस्यैव लक्ष्यत्वाभिप्रायेण। ईश्वरप्रत्यक्षसाधारणं लक्षणं तु ज्ञानाकरणकम्। ज्ञानाकरणकमिति प्रत्यक्षप्रमालक्षणं। ज्ञानं व्याप्तिज्ञानं सादृश्यज्ञानं पदज्ञानं च, तदेव करणं येषां तानि ज्ञानकरणकानि अनुमित्युपमितिशाब्दानि, तद्भिन्नत्वमित्यर्थः। प्रत्यक्ष इन्द्रियाणामेव करणत्वान्न ज्ञानस्य करणत्वम्[4]। इदं लक्षणमीश्वरप्रत्यक्षसाधारणमीश्वरप्रत्यक्षस्याजन्यत्वात्। जन्यप्रत्यक्षस्यैव लक्ष्यत्वा-

1 A G J Y Z omit the sentence.

2 S U and W read बाह्य for षाड्विध.

3 C K R V omit this sentence, and perhaps it is spurious. U here adds विशेष्यमात्रोक्तौ स्मृतावतिव्याप्तिर्विशेषणमात्रोक्तौ तद्धंसेऽतिव्याप्तिर्ध्वंसं प्रति स्वप्रतियोगिनः कारणत्वादत उभयोरुपादानम्. V is nearly to the same effect.

4 The reading of U and W is adopted as being more intelligible. Other copies transpose the sentences. U adds क्षेपकं लक्षणमिदं very appropriately. See Note, *loc. cit.*

भिप्रायेणोत्तरमाह—**इन्द्रियार्थसन्निकर्षे**ति । जन्यप्रत्यक्षस्यैव लक्ष्यत्वाभिप्रायेणेदं लक्षणम् ॥ प्रत्यक्षं विभजते—**निर्विकल्पकमि**ति । तल्लक्षयति—**निष्प्रकारकमि**ति । प्रकारताशून्यज्ञानत्वमेव निर्विकल्पकत्वमित्यर्थः । निर्विकल्पके चतुर्थी विषयता स्वीक्रियते । न तु त्रिविधविषयतामध्ये कापि तत्रास्ति । अतो विशेषणताशून्यत्वमिव विशेष्यताशून्यत्वं सन्निकर्षताशून्यत्वमित्यपि लक्षणं संभवति ॥ सविकल्पकं लक्षयति—**सप्रकारकमि**ति । विषयताया ज्ञाननिरूपितत्वात् ज्ञानस्य विषयतानिरूपकत्वेन प्रकारतानिरूपकज्ञानत्वं सविकल्पकस्य लक्षणम् । एवं विशेष्यतानिरूपकज्ञानत्वं सन्निकर्षतानिरूपकज्ञानत्वमित्यपि लक्षणं संभवति । उदाहरणं **यथे**ति । इदंत्वावच्छिन्नविशेष्यतानिरूपितडित्थत्वप्रकारताशालिज्ञानं ब्राह्मणत्वप्रकारताशालिज्ञानं च सविकल्पकमित्यर्थः ॥

[४३]

प्रत्यक्षज्ञानहेतुरिन्द्रियार्थसंनिकर्षः षड्विधः । संयोगः, संयुक्तसमवायः, संयुक्तसमवेतसमवायः, समवायः, समवेतसमवायो, विशेषणविशेष्यभावश्चेति[1] । चक्षुषा घटप्रत्यक्षजनने[2] संयोगः संनिकर्षः । घटरूपप्रत्यक्षजनने[3] संयुक्तसमवायः संनिकर्षः, चक्षुःसंयुक्ते घटे रूपस्य समवायात् । रूपत्वसामान्यप्रत्यक्षे संयुक्तसमवेतसमवायः संनिकर्षः, चक्षुःसंयुक्ते घटे रूपं समवेतं तत्र रूपत्वस्य समवायात् । श्रोत्रेण शब्दसाक्षात्कारे समवायः संनिकर्षः, कर्णविवरवृत्त्याकाशस्य श्रोत्रत्वात्, शब्दस्याकाशगुणत्वात्, गुणगुणिनोश्च समवायात् । शब्दत्वसाक्षात्कारे समवेतसमवायः संनिकर्षः, श्रोत्रसमवेते शब्दे शब्दत्वस्य समवायात् । अभावप्रत्यक्षे विशेषणविशेष्यभावः संनिकर्षो, घटाभाववद्भूतलमित्यत्र चक्षुःसंयुक्ते भूतले घटाभावस्य

1 A B join the words in a compound; J reads विशेषणता च for विशेषणविशेष्यभावश्च.

2 K inserts ज्ञान after प्रत्यक्ष unnecessarily.

3 K G read प्रत्यक्षे for प्रत्यक्षजनने, and omit संनिकर्षः in the following sentences.

विशेषणत्वात्[1]। एवं संनिकर्षषट्कजन्यं[2] ज्ञानं प्रत्यक्षम् । तत्करणमिन्द्रियम् । तस्मादिन्द्रियं[3] प्रत्यक्षप्रमाणमिति सिद्धम् ॥

त. दी.—इन्द्रियार्थसंनिकर्षं विभजते—**प्रत्यक्षेति** । संयोगसंनिकर्षमुदाहरति—**चक्षुषेति** । द्रव्यप्रत्यक्षे सर्वत्र संयोगः संनिकर्ष इत्यर्थः । आत्मा मनसा संयुज्यते, मन इन्द्रियेण, इन्द्रियमर्थेन, ततः प्रत्यक्षज्ञानमुत्पद्यते । संयुक्तसमवायमुदाहरति—**घटरूपेति** । तत्र युक्तिमाह—**चक्षुःसंयुक्त** इति । संयुक्तसमवेतसमवायमुदाहरति—**रूपत्वेति** । समवायमुदाहरति—**श्रोत्रेणेति** । तदुपपादयति—**कर्णेति** । ननु दूरस्थशब्दस्य कथं श्रोत्रसंबन्ध इति चेन्न वीचितरङ्गन्यायेन कदम्बमुकुलन्यायेन वा शब्दाच्छब्दान्तरोत्पत्तिक्रमेण श्रोत्रदेशे[4] जातस्य शब्दस्य श्रोत्रसंबन्धात्प्रत्यक्षत्वसंभवात् । समवेतसमवायमुदाहरति—**शब्दत्वेति** । विशेषणविशेष्यभावमुदाहरति—**अभावेति** । तदुपपादयति—**घटाभाववदिति** । भूतले[5] घटो नास्तीत्यत्र घटाभावस्य विशेषणत्वं द्रष्टव्यम् । एतेनानुपलब्धेः प्रमाणान्तरत्वं निरस्तम् । यद्यत्र घटोऽभविष्यत्तर्हि भूतलमिवाद्रक्ष्यत् । दर्शनाभावान्नास्तीति तर्कितप्रतियोगिसत्त्वविरोध्यनुपलब्धिसहकृतेन्द्रियेणैवाभावज्ञानोपपत्तौ अनुपलब्धेः प्रमाणान्तरत्वासंभवात् । अधिकरणज्ञानार्थमपेक्षणीयेन्द्रियस्यैव करणत्वोपपत्तावनुपलब्धेः करणत्वस्याक्लृप्तत्वात् । विशेषणविशेष्यभावो विशेषणविशेष्यस्वरूपमेव, नातिरिक्तः संबन्धः[6] । प्रत्यक्षज्ञा-

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1 K here adds भूतलस्य विशेष्यत्वात्. As to the correct reading of this passage, see Note *loc. cit.*

2 J has °षट्कजं.

3 J omits इन्द्रियं and reads प्रत्यक्षं प्रमाणं for प्रत्यक्षप्रमाणं.

4 C G J L M N Y omit शब्दात्, and A C F L M P Q omit शब्दस्य, but are retained as helping to make the sense clear. For श्रोत्रदेशे P reads अन्यदेशे which gives a somewhat different though equally good meaning.

5 A F Q here add भूतलं विशेष्यं घटाभावः विशेषणं which is unwarranted and misleading.

6 N here inserts ननु विशेषणविशेष्यभावसंनिकर्षस्य लक्षणानाक्रान्तत्वात्कथं संबन्धत्वमिति चेन्न, but the passage appears to be interpolated.

नमुपसंहरंस्तस्य करणमाह—**एवमिति**। असाधारणकारणत्वादिन्द्रियं प्रत्यक्षज्ञानकरणमित्यर्थः[1]। प्रत्यक्षमुपसंहरति—**तस्मादिति**॥

न्या. बो.—चाक्षुषादिप्रत्यक्षकारणीभूतान् षड्विधसन्निकर्षान्विभजते—**संयोग** इत्यादिना। द्रव्यवृत्तिलौकिकविषयतासंबन्धेन चाक्षुषत्वावच्छिन्नं प्रति चक्षुःसंयोगस्य कारणत्वम्। द्रव्यसमवेतवृत्तिलौकिकविषयतासंबन्धेन चाक्षुषत्वावच्छिन्नं प्रति चक्षुःसंयुक्तसमवायस्य कारणत्वम्। द्रव्यसमवेतसमवेतवृत्तिलौकिकविषयतासंबन्धेन चाक्षुषत्वावच्छिन्नं प्रति चक्षुःसंयुक्तसमवेतसमवायस्य कारणत्वम्[2]। द्रव्यग्राहकाणीन्द्रियाणि चक्षुस्त्वङ्मनांसि त्रीण्येव। अन्यानि घ्राणरसनश्रवणानि तु गुणग्राहकाणि। अतस्त्वगिन्द्रियस्थले द्रव्यवृत्तिलौकिकविषयतासंबन्धेन त्वाचत्वावच्छिन्नं प्रति त्वक्संयोगस्य कारणत्वम्। एवं द्रव्यसमवेतत्वाचत्वावच्छिन्नं प्रति त्वक्संयुक्तसमवायस्य कारणत्वम्। द्रव्यसमवेतसमवेतोष्णत्वशीतत्वादिजातिस्पार्शनप्रत्यक्षे त्वक्संयुक्तसमवेतसमवायस्य कारणत्वम्। एवमात्मरूपद्रव्यमानसप्रत्यक्षे मनःसंयोगस्य कारणत्वम्। आत्मसमवेतसुखादिमानसप्रत्यक्षे मनःसंयुक्तसमवायस्य कारणत्वम्। आत्मसमवेतसमवेतसुखत्वादिमानसप्रत्यक्षे मनःसंयुक्तसमवेतसमवायस्य कारणत्वम्। रसनघ्राणयोस्तु रसगन्धतद्गतजातिग्राहकत्वेन द्वितीयतृतीययोः सन्निकर्षयोरेव रसगन्धादिप्रत्यक्षे हेतुता वाच्या। श्रवणेन्द्रियस्याकाशरूपत्वेन शब्दस्याकाशगुणत्वेन श्रवणेन्द्रियेण च समं शब्दस्य समवायः सन्निकर्षः। शब्दसमवेतशब्दत्वादिजातिविषयकश्रावणप्रत्यक्षे समवेतसमवायस्य हेतुता॥ अभावप्रत्यक्षे विशेषणविशेष्यभावो नाम विशेषणतासन्निकर्षः॥ [3]पञ्चसन्निकर्षेषु मध्ये संयोगस्थाने संयुक्तपदं घटयित्वा समवायस्थाने समवेतपदं घटयित्वा अभावस्थले निर्वाह्यम्। तथाहि द्रव्याधिकरणका-

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1 N adds प्रत्यक्षप्रमाकरणत्वादित्यर्थः.

2 S T V omit this sentence.

3 The whole passage from पञ्च° to इति संक्षेपः seems to be corrupt. The reading of W is adopted as being the most intelligible.

भावप्रत्यक्षे संयुक्तविशेषणता । द्रव्यसमवेताधिकरणकाभावप्रत्यक्षे संयुक्त-समवेतविशेषणता च । द्रव्यसमवेतसमवेताधिकरणकाभावप्रत्यक्षे संयुक्त-समवेतसमवेतविशेषणता च संनिकर्षः । तत्र घटे घटत्वाभावः संयुक्त-विशेषणतया गृह्यते । घटसमवेतघटत्वादौ पृथिवीत्वाभावः संयुक्तसमवेत-विशेषणतया गृह्यते । घटसमवेतसमवेतरूपत्वादौ नीलत्वाभावश्च संयुक्तसमवेतसमवेतविशेषणतया गृह्यत इति संक्षेपः ॥ इति प्रत्यक्षपरि-च्छेदः समाप्तः ॥

[४४]

अनुमितिकरणमनुमानम् । परामर्शजन्यं ज्ञानमनुमितिः । व्याप्तिविशिष्टपक्षधर्मताज्ञानं परामर्शः । यथा वह्निव्याप्य धूमवा-नयं पर्वत इति ज्ञानं परामर्शः[1] । तज्जन्यं पर्वतो वह्निमानिति ज्ञान-मनुमितिः । यत्र यत्र धूमस्तत्राग्निरिति साहचर्यनियमो व्याप्तिः । व्याप्यस्य पर्वतादिवृत्तित्वं पक्षधर्मता ॥

त. दी.—अनुमानं लक्षयति—**अनुमितिकरणमि**ति । अनुमि-तेर्लक्षणमाह—**परामर्शे**ति । ननु संशयोत्तरप्रत्यक्षेऽतिव्याप्तिः, स्थाणुपु-रुषसंशयानन्तरं, पुरुषत्वव्याप्यकरादिमानयमिति परामर्शे सति, पुरुष ए-वेति प्रत्यक्षजननात् । न च तत्रानुमितिरेवेति वाच्यम् । ''पुरुषं साक्षात्क-रोमि'' इत्यनुव्यवसायविरोधादिति चेन्न । पक्षतासहकृतपरामर्शजन्यत्वस्य विवक्षितत्वात् । सिषाधयिषाविरहसहकृतसिद्ध्यभावः पक्षता । साध्यसि-द्धिरनुमितिप्रतिबन्धिका । सिद्धिसत्त्वेऽप्यनुमिनुयामितीच्छायामनुमितिद-र्शनात् सिषाधयिषोत्तेजिका । ततश्चोत्तेजकाभावविशिष्टमण्यभावस्य दा-हकारणत्ववत् सिषाधयिषाविरहसहकृतसिद्ध्यभावस्याप्यनुमितिकारण-त्वम् ॥ परामर्शं लक्षयति—**व्याप्ती**ति । व्याप्तिविषयकं यत्पक्षधर्मताज्ञानं

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1 E and X omit ज्ञानं परामर्शः and perhaps for the better; G omits अयम्.

स परामर्श इत्यर्थः। परामर्शमभिनीय दर्शयति—**यथेति**। अनुमितिमभिनयति—**तज्जन्यमिति**। परामर्शजन्यमित्यर्थः॥ व्याप्तेर्लक्षणमाह—**यत्रेति**। यत्र धूमस्तत्राग्निरिति व्याप्तेरभिनयः। साहचर्यनियम इति लक्षणम्। साहचर्यं सामानाधिकरण्यं, तस्य नियमः। हेतुसमानाधिकरणात्यन्ताभावाप्रतियोगिसाध्यसामानाधिकरण्यं व्याप्तिरित्यर्थः। पक्षधर्मतास्वरूपमाह—**व्याप्यस्येति** ॥

न्या. बो.—अनुमानं लक्षयति—**अनुमितिकरणमिति**। अनुमितौ व्याप्तिज्ञानं करणं, परामर्शो व्यापारोऽनुमितिः फलं कार्यमित्यर्थः। परामर्शस्य व्याप्तिज्ञानजन्यत्वे सति व्याप्तिज्ञानजन्यानुमितिजनकत्वाच्च तज्जन्यत्वे सति तज्जन्यजनकत्वरूपव्यापारलक्षणमुपपन्नम्। अनुमितिकरणत्वमनुमानस्य लक्षणम्। अनुमानं च व्याप्तिज्ञानम्। एतस्य परामर्शरूपव्यापारद्वाराऽनुमितिं प्रत्यसाधारणकारणतयाऽनुमितिकरणत्वमुपपन्नम्। **परामर्शजन्यमिति**। परामर्शजन्यत्वविशिष्टज्ञानत्वमनुमितेर्लक्षणम्। तत्र ज्ञानत्वमात्रोपादाने प्रत्यक्षादावतिव्याप्तिरतस्तद्वारणाय परामर्शजन्यत्वे सतीति विशेषणोपादानम्। विशेषणमात्रोक्तौ परामर्शध्वंसेतिव्याप्तिरतस्तद्वारणाय ज्ञानत्वोपादानम्। अनुमितिलक्षणघटकीभूतपरामर्शलक्षणमाचष्टे—**व्याप्तिविशिष्टेति**। व्याप्तिविशिष्टं च तत्पक्षधर्मताज्ञानं चेति कर्मधारयः। अत्र विशिष्टपदस्य प्रकारतापरत्वात् पक्षधर्मताया ज्ञानमित्यत्र षष्ठ्या विषयत्वबोधनात् पक्षधर्मतापदस्य पक्षसंबन्धार्थकत्वात्कर्मधारयसमासे समस्यमानपदार्थयोरभेदसंसर्गलाभेन च व्याप्तिप्रकारकाभिन्नं यत्पक्षसंबन्धविषयकं ज्ञानं तत्परामर्श इति लभ्यते।

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1 N here adds व्याप्यो नाम व्याप्त्याश्रयः स च धूमादिरेव तस्य पर्वतादिनिरूपितवृत्तित्वं पक्षधर्मतेत्यर्थः, but the wording of the sentence as well as its absence in any other copy prove its spuriousness.

5 C K R Y omit the sentence अनुमिति—माचष्टे; and give the full definition of परामर्श instead of the following प्रतीक.

एवं सति धूमो वह्निव्याप्य आलोकवान्पर्वत इति समूहालंबनेऽप्युक्तपरामर्शलक्षणमस्तीत्यतिव्याप्तिः, तद्वारणाय पक्षानिष्ठविशेष्यतानिरूपितहेतुनिष्ठप्रकारतानिरूपितव्याप्तिनिष्ठप्रकारताशालिज्ञानं परामर्श इति निष्कर्षः । एतादृशपरामर्शजन्यत्वे सति ज्ञानत्वमनुमितेर्लक्षणम् । अनुमितिपरामर्शयोर्विशिष्य कार्यकारणभावश्चेत्थम् । वह्नित्वावच्छिन्नसंयोगसंबन्धावच्छिन्नविधेयतानिरूपित— पर्वतत्वावच्छिन्नोद्देश्यताशाल्यनुमितित्वावच्छिन्नं प्रति वह्नित्वावच्छिन्नप्रकारतानिरूपित—व्याप्तित्वावच्छिन्नप्रकारतानिरूपित-धूमत्वावच्छिन्नप्रकारतानिरूपित- पर्वतत्वावच्छिन्नविशेष्यतानिरूपित— विशेष्यिताशालिनिर्णयः कारणम् । वह्नित्वावच्छिन्नप्रकारतानिरूपित-व्याप्तित्वावच्छिन्नविशेष्यताया धूमत्वावच्छिन्नविशेष्यतानिरूपित—व्याप्तित्वावच्छिन्नप्रकारतायाश्च अभेदानङ्गीकर्तृमते वह्नित्वावच्छिन्नप्रकारतानिरूपित— विशेष्यत्वावच्छिन्नव्याप्तित्वावच्छिन्नप्रकारतानिरूपित— विशेष्यत्वावच्छिन्नधूमत्वावच्छिन्नप्रकारतानिरूपित—पर्वतत्वावच्छिन्नविशेष्यतानिरूपितविशेष्यिताशालिनिर्णयः कारणमिति वाच्यम् । स च निर्णयो वह्निव्याप्यधूमवान् पर्वत इत्याकारको बोध्यः ॥

यत्रेति । यत्रपदवीप्सावशात् धूमाधिकरणे यावति वह्निमत्त्वलाभात् यावत्पदमहिम्ना वह्नेर्धूमव्यापकत्वं लब्धम् । तदेव स्पष्टयति—साहचर्यनियम इति । नियतसाहचर्यं व्याप्तिरित्यर्थः । नियतत्वं व्यापकत्वं । [2]साहचर्यं सामानाधिकरण्यम् । तथा च धूमव्यापकवह्निसामानाधिकरण्यं व्याप्तिरित्यर्थः। वह्नेर्धूमव्यापकत्वं च धूमसमानाधिकरणात्यंताभावप्रतियोगितानवच्छेदकधर्मवत्त्वम् । तथाहि धूमाधिकरणे चत्वरमहानसादौ वर्तमानोऽभावो घटत्वाद्यवच्छिन्नप्रतियोगिताकाभावः, न तु वह्नित्वावच्छिन्नप्रतियोगिताकाभावः । कुतः । चत्वरमहानसादौ वह्नेः सत्त्वात् । एवं सति धूमाधिकरणे पर्वतचत्वरादौ वर्तमानस्य घटाद्यभावस्य प्रतियोगितावच्छेदकं

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1 The passage, which follows, seems to have been much tampered with. O K R V generally agree among themselves, though they materially differ from the above.

2 The passage is taken from S and W, but is not found in other copies.

घटत्वादिकमनवच्छेदकं वह्नित्वं वह्नौ वर्ततेऽतो धूमव्यापकत्वं वह्नौ वर्तते। इयमन्वयव्याप्तिः सिद्धान्तानुसारेण। पूर्वपक्षव्याप्तिस्तु प्रतियोगिव्यधिकरण—साध्याभाववदवृत्तित्वम्। साध्यतावच्छेदकसंबन्धावच्छिन्न— साध्यतावच्छेदकावच्छिन्नप्रतियोगिताक— प्रतियोगितावच्छेदकसंबन्धावच्छिन्न—प्रतियोगितावच्छेदकावच्छिन्नवैय्यधिकरण्यावच्छिन्नाभाववन्निरूपितहेतुतावच्छेदकसंबन्धावच्छिन्न—वृत्तित्वावच्छिन्न—प्रतियोगिताकाभावो व्याप्तिरित्यर्थः। तच्च केवलान्वयिन्यव्याप्तमिति सिद्धान्तानुसरणम्॥

[४५]

अनुमानं द्विविधं स्वार्थं परार्थं च। तत्र स्वार्थं स्वानुमितिहेतुः।[2] तथा हि स्वयमेव भूयो दर्शनेन यत्र धूमस्तत्राग्निरिति महानसादौ व्याप्तिं गृहीत्वा पर्वतसमीपं गतस्तद्गते चाग्नौ संदिहानः[3] पर्वते धूमं पश्यन्व्याप्तिं स्मरति यत्र धूमस्तत्राग्निरिति। तदनन्तरं वह्निव्याप्यधूमवानयं पर्वत इति ज्ञानमुत्पद्यते। अयमेव लिङ्गपरामर्श इत्युच्यते। तस्मात्पर्वतो वह्निमानिति ज्ञानमनुमितिरुत्पद्यते।[4] तदेतत्स्वार्थानुमानम्।

यत्तु स्वयं धूमादग्निमनुमाय परप्रतिपत्त्यर्थं[5] पञ्चावयववाक्यं प्रयुङ्क्ते तत्परार्थानुमानम्। यथा पर्वतो वह्निमान्धूमवत्त्वात्। यो यो धूमवान्स वह्निमान् यथा महानसः। तथा चायम्। तस्मात्तथेति। अनेन प्रतिपादिताल्लिङ्गात्परोप्यग्निं प्रतिपद्यते॥

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1 S W here adds तथाच धूमव्यापकवह्निसामानाधिकरण्यं व्याप्तिरिति फलितम्.

2 D adds परार्थं परप्रतिपत्तिहेतुः.

3 A B C D F H have गत्वा for गतः probably substituted to avoid repetition of गतः. For तद्गते H has तत आर्द्रेन्धने, a further emendation not warranted by the context.

4 C reads अनुमितिरूपम् for अनुमितिः; X omits it.

5 A B C D read परं प्रति बोधयितुं which makes the construction awkward; J reads प्रतीति for प्रतिपत्ति, and C प्रयुज्यते for प्रयुङ्क्ते; G has पञ्चावयवोपेतं for पञ्चावयव°.

त. दी.—अनुमानं विभजते—**अनुमानमिति** । स्वार्थानुमितिं दर्शयति—**स्वयमेवेति** । **भूयोदर्शनेनेति** । धूमाग्न्योर्व्याप्तिग्रहे साध्यसाधनयोर्भूयः सहचारदर्शनेनेत्यर्थः । ननु पार्थिवत्वलोहलेख्यत्वादौ शतशः सहचारदर्शनेऽपि वज्रादौ व्यभिचारोपलब्धे[3]र्भूयोदर्शनेन कथं व्याप्तिग्रह इति चेन्न व्यभिचारज्ञानविरहसहकृतसहचारज्ञानस्य व्याप्तिग्राहकत्वात् । व्यभिचारज्ञानं द्विविधम्, निश्चयः शङ्का च । तद्विरहः क्वचित्तर्कात्क्वचित्स्वतःसिद्ध एव । धूमाग्निव्याप्तिग्रहे कार्यकारणभावभङ्गप्रसङ्गलक्षणस्तर्को व्यभिचारशङ्कानिवर्तकः ॥ ननु सकलवह्निधूमयोरसंनिकर्षात्कथं व्याप्तिग्रह इति चेन्न । धूमत्ववह्नित्वरूपसामान्यलक्षणप्रत्यासत्त्या सकलधूमवह्निज्ञानसंभवात् ॥ **तस्मादिति** । लिङ्गपरामर्शादित्यर्थः । परार्थानुमानमाह—**यत्त्विति** ॥ यच्छब्दस्य तत्परार्थानुमानमिति तच्छब्देनान्वयः ॥ पञ्चावयववाक्यमुदाहरति—**यथेति** ॥

न्या. बो.—अनुमानं विभजते—**स्वार्थमिति** । स्वार्थानुमानं नाम न्यायप्रयोज्यानुमानम् । तत्प्रयोज्यानुमानं परार्थानुमानम् ॥ न्यायत्वं च प्रतिज्ञाद्यवयवपञ्चकसमुदायत्वम् । अवयवत्वं च प्रतिज्ञाद्यन्यतमत्वम् ॥

[४६]

प्रतिज्ञाहेतूदाहरणोपनयनिगमनानि पञ्चावयवाः । पर्वतो वह्निमानिति प्रतिज्ञा । धूमवत्त्वादिति हेतुः । यो यो धूमवान्स सोऽग्निमान्यथा महानस इत्यु[4]दाहरणम् । तथा चायमित्युपनयः । तस्मात्तथेति निगमनम् ॥

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1 J Y omit this sentence. A adds स्वार्थानुमानं विविच्य दर्शयति—तथाहीति which is superfluous. F and Q here add तद्द्वैविध्यं दर्शयति—स्वार्थमिति । तत्रेति । उभयोर्मध्य इत्यर्थः ।

2 The passage is taken from N. A omits the whole of it, while other copies retain भूयोदर्शनेनेति, omitting the latter part, which, however, appears to be necessary to complete the explanation.

3 M N omit वज्रादौ व्यभिचारोपलब्धेः, while J Y Z omit वज्रादौ only; L reads वज्रमणौ, P हीरके, and Q मण्यादौ.

4 The reading is that of D H K; J gives the same minus one सः and with महानसे. C E omit यथा महानसः, while A B F retain only the first three words.

त. दी.—अवयवस्वरूपमाह—प्रतिज्ञेति । उदाहृतवाक्ये प्रतिज्ञादिविभागमाह—पर्वतो वह्निमानिति । साध्यवत्तया पक्षवचनं प्रतिज्ञा ॥ पञ्चम्यन्तं लिङ्गप्रतिपादकं वचनं हेतुः । व्याप्तिप्रतिपादकमुदाहरणम् । पक्षधर्मताज्ञानार्थमुपनयः । अबाधितत्वादिकं निगमनप्रयोजनम् ॥

[४७]

स्वार्थानुमितिपरार्थानुमित्योर्लिङ्गपरामर्श एव करणम्³ । तस्माल्लिङ्गपरामर्शोऽनुमानम् ॥

त. दी.—अनुमितिकरणमाह—स्वार्थेति ॥ ननु व्याप्तिस्मृतिपक्ष-

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1 A G L P Y Z have विशेष for विभाग.

2 The passage from पञ्चम्यन्तं to the end appears to have been tampered with. All copies except G N and Z agree in reading it as above. N and Z give a materially different version:—पञ्चम्यन्तं तृतीयान्तं वा लिङ्गप्रतिपादकं वचनं हेतुः । व्याप्तिप्रतिपादकं दृष्टान्तवचनमुदाहरणम् । व्याप्तिविशिष्टलिङ्गप्रतिपादकं वचनमुपनयः । हेतुसाध्यवत्तया पक्षप्रतिपादकं वचनं निगमनम् । पक्षज्ञानं प्रतिज्ञाप्रयोजनम् । लिङ्गज्ञानं हेतुप्रयोजनम् । व्याप्तिज्ञानमुदाहरणप्रयोजनम् । पक्षधर्मताज्ञानमुपनयप्रयोजनम् । अबाधितत्वादिकं निगमनप्रयोजनम् । G and Q agree with this from व्याप्तिविशिष्ट° to the end. The repetitions and fuller explanation in this passage show that it is an interpolation. *Nil.* does not seem to be aware of it, especially its latter half beginning with पक्षज्ञानं प्रतिज्ञाप्रयोजनम्. Having explained the definitions as read by N, *Nil.* notices the reading adopted in our text as a *v. l.* and remarks पक्षधर्मताज्ञानार्थमुपनय इति पाठे तु 'प्रयुज्यते' इति शेषपूरणेन प्रदर्शितार्थ एव यथाकथंचित् संगमनीयः । This shows that even *Nil.* found the text corrupt, and was not satisfied with the reading usually met with. It is possible that some later writer corrected the loose definitions of उपनय and निगमन given by *Annambhaṭṭa* and the latter being retained three more प्रयोजनघटित sentences were added to complete the list.

3 Curiously enough all copies except G K X read कारणं which is clearly a mistake. In J the vertical bar appears to have been erased afterwards.

धर्मताज्ञानाभ्यामेवानुमितिसंभवे व्याप्तिविशिष्टलिङ्गपरामर्शः[1] किमर्थमङ्गीकर्तव्य इति चेन्न। वह्निव्याप्यधूमवानयमिति शाब्दपरामर्शस्थले विशिष्टपरामर्शस्यावश्यकतया लाघवेन सर्वत्र परामर्शस्यैव करणत्वात्। लिङ्गं न करणम् । अतीतादौ व्यभिचारात्। व्यापारवत्कारणं करणमिति मते परामर्शद्वारा व्याप्तिज्ञानं[2] करणम् । तज्जन्यत्वे सति तज्जन्यजनको व्यापारः ॥ अनुमानमुपसंहरति—**तस्मादिति** ॥

[४८]

लिङ्गं त्रिविधम् । अन्वयव्यतिरेकि केवलान्वयि केवलव्यतिरेकि चेति । अन्वयेन व्यतिरेकेण च[3]व्याप्तिमदन्वयव्यतिरेकि । यथा वह्नौ साध्ये धूमवत्त्वम् । यत्र धूमस्तत्राग्निर्यथा महानस इत्यन्वयव्याप्तिः । यत्र वह्निर्नास्ति तत्र धूमोऽपि नास्ति यथ महाह्रद इति व्यतिरेकव्याप्तिः । [4]अन्वयमात्रव्याप्तिकं केवलान्वयि यथा घटोऽभिधेयः प्रमेयत्वात्पटवत् । अत्र प्रमेयत्वाभिधेयत्वयोर्व्यतिरेकव्याप्तिर्नास्ति सर्वस्यापि प्रमेयत्वादभिधेयत्वाच्च ।व्यतिरेकमात्रव्याप्तिकं केवलव्यतिरेकि यथा पृथिवीतरे[5]भ्यो भिद्यते गन्धवत्त्वात् । यदितरेभ्यो न भिद्यते न तद्गन्धवत् यथा जलम्, न चेयं तथा, तस्मान्न तथेति । यद्गन्धवत्तदितरभिन्नमित्यन्वयदृष्टान्तो नास्ति पृथिवीमात्रस्य पक्षत्वात् ॥

त. दी.—लिङ्गं विभजते—**लिङ्गमिति** ॥ अन्वयव्यतिरेकि लक्षयति—**अन्वयेनेति** । हेतुसाध्ययोर्व्याप्तिरन्वयव्याप्तिः । तदभावयोर्व्याप्तिर्व्यतिरेकव्याप्तिः ॥ केवलान्वयिनो लक्षणमाह—**अन्वयेति** । केवलान्व-

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1 A F and Q omit the words व्याप्तिलिङ्ग and विशिष्ट before परामर्श.

2 After व्याप्तिज्ञानं A and F add पक्षज्ञानं साध्यज्ञानं लिङ्गज्ञानं यत्किञ्चिज्जन्यज्ञानमात्रं वा परामर्शव्यापारकम्.

3 For व्याप्तिमद् C reads यत्रव्याप्तिस्तद्.

4 C here adds यत्सत्त्वे तत्सत्त्वमन्वयः । यदभावे तदभावो व्यतिरेकः, but the words are found nowhere else.

5 O G H read °रेभ्यः; F has इतरभेदवद्.

यिसाध्यकं केवलान्वयि। अत्यन्ताभावाप्रतियोगित्वं केवलान्वयित्वम्। केवलान्वयिनमुदाहरति यथा घटोभिधेयः प्रमेयत्वादिति। ईश्वरप्रमाविषयत्वं सर्वपदाभिधेयत्वं च सर्वत्रास्तीति व्यतिरेकाभावः ॥ केवलव्यतिरेकिणो लक्षणमाह—व्यतिरेकेति। केवलव्यतिरेकिणमुदाहरति—पृथिवीति। नन्वितरभेदः प्रसिद्धो वा न वा। आद्ये यत्र प्रसिद्धस्तत्र हेतुसत्त्वेऽन्वयित्वम् असत्त्वेऽसाधारण्यम्। द्वितीये साध्यज्ञानाभावात्कथं तद्विशिष्टानुमितिः। विशेषणज्ञानाभावे विशिष्टज्ञानानुदयात्। प्रतियोगिज्ञानाभावाद्व्यतिरेकव्याप्तिज्ञानमपि न स्यादिति चेन्न। जलादित्रयोदशान्योन्याभावानां त्रयोदशसु प्रत्येकं प्रसिद्धानां मेलनं पृथिव्यां साध्यते। तत्र त्रयोदशत्वावच्छिन्नभेदस्यैकाधिकरणवृत्तित्वाभावान्नान्वयित्वासाधारण्ये। प्रत्येकाधिकरणे प्रसिद्ध्या साध्यविशिष्टानुमितिर्व्यतिरेकव्याप्तिनिरूपणं चेति[3] ॥

न्या. बो.—अन्वयेनेति। साध्यसामानाधिकरण्यरूपान्वयव्याप्तिमानित्यर्थः। **व्यतिरेकेणेति**। व्यतिरेको नामाभावः। तथा च साध्याभावहत्वभावयोर्व्याप्तिर्व्यतिरेकव्याप्तिः। इयं च व्याप्तिः **यत्र यत्र वह्न्यभावस्तत्र तत्र धूमाभाव** इति। यत्रपदवीप्सया वह्न्यभाववति यावति धूमाभावग्रहणे यावत्पदस्य व्यापकत्वपरतया धूमाभावे वह्न्य-

1 A J Y Z omit this sentence. G replaces this and the next sentence by a single one व्यतिरेकि दर्शयति—व्यतिरेकमात्रेति.

2 M inserts अभावज्ञानाभावेन after प्रतियोगिज्ञानाभावात्

3 The concluding passage of TD beginning with तत्र is undoubtedly corrupt, and is absolutely unintelligible as it is read in most of the printed editions and Mss. Only N and J seem to give an approximately correct and intelligible reading. I have substituted भेद for साध्य and changed प्रत्येकाधिकरण° into °करणे, on the single authority of N, because the emendations make the meaning clearer. J F and Q alone make नान्वयित्वासाधारण्ये part of the previous sentence as it certainly ought to be. F and Q insert साध्याभावव्यापकीभूताभावप्रतियोगित्वमिति before व्यतिरेक°

• See Note *loc. cit.*

भावव्यापकत्वं लब्धम् । एवं च वह्न्यभावनिष्ठा व्याप्तिः स्वाश्रयीभूतवह्न्यभावव्यापकीभूताभावप्रतियोगित्वसंबन्धेन धूमनिष्ठतया गृह्यत इति व्यतिरेकव्याप्तिमत्त्वेन व्यतिरेकित्वेन धूमव्यापकवह्निसामानाधिकरण्यरूपान्वयव्याप्तिमत्त्वेनान्वयित्वेन च गीयते[1] । व्यतिरेकपरामर्शस्तु वह्न्यभावव्यापकीभूताभावप्रतियोगिधूमवान् पर्वत इत्याकारकः ॥

केवलान्वयिनो लक्षणमाह—**अन्वये**ति । व्यतिरेकव्याप्तिशून्यत्वे सत्यन्वयव्याप्तिमत्त्वं केवलान्वयित्वम् । साध्ये केवलान्वयित्वमभावाप्रतियोगित्वम् । तथा चाभावाप्रतियोगिसाध्यकत्वं केवलान्वयिहेतोर्लक्षणम्[2] । एतल्लक्षणं हेतोर्व्यतिरेकित्वेऽपि संगच्छते । साध्यस्य केवलान्वयित्वाद्व्यतिरेकव्याप्तेरभावादन्वयमात्रव्याप्तिकं केवलान्वयीति मूलोक्तलक्षणमुपपन्नम् । अत्यन्ताभावाप्रतियोगित्वं केवलान्वयित्वम् । न चैवमाकाशाभावे संयोगाभावे चाव्याप्तिरिति वाच्यम् । स्वविरोधिवृत्तिमदत्यन्ताभावाप्रतियोगित्वस्यैव तदर्थत्वात् । एकजातीयसंबन्धेन सर्वत्र विद्यमानत्वं केवलान्वयित्वमिति नव्याः ॥ केवलव्यतिरेकिणो लक्षणमाह—**व्यतिरेके**ति ॥ अन्वयव्याप्तिशून्यत्वे सति व्यतिरेकव्याप्तिमत्त्वं केवलव्यतिरेकित्वम् । **यथे**ति । अत्र पृथिवीत्वावच्छिन्नं पक्षः । पृथिवीतरजलादिभेदः साध्यः । गन्धवत्त्वं हेतुः । अत्र यद्गन्धवत्तदितरभेदवदित्यन्वयदृष्टान्ताभावात्, गन्धव्यापकेतरभेदसामानाधिकरण्यरूपान्वयव्याप्तिग्रहासंभवात्, नास्त्यन्वयव्याप्तिः ॥ किंतु यत्र यत्र पृथिवीतरभेदाभावस्तत्र तत्र गन्धाभावो यथा जलादिकमिति । व्यतिरेकदृष्टान्तभूतजलादावितरभेदाभावरूपसाध्याभावव्यापकता गन्धाभावे दृश्यते। इममेवार्थं मनसि निधाय **यदितरेभ्यो न भिद्यते न तद्गन्धवद्यथा जल**मिति ग्रन्थेन मूलकारो व्यतिरेकव्याप्तिमेव प्रदर्शितवान् । एवं व्यतिरेकव्याप्तिग्रहानन्तरम्, इतरभेदाभावव्यापकीभूताभावप्रतियोगिगन्धवती पृथिवी इत्याकारकव्यतिरेकपराम-

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1 S and W read the passage a little differently.

2 Instead of this sentence S and W have **अथवा केवलान्वयित्वाव्यापकत्वं तत्** ।

3 W reads **तथा च तयोः एकजातीयसंबन्धेन सर्वत्र विद्यमानत्वादव्याप्तिः** ।

र्शात् पृथिवीत्वावच्छिन्नोद्देश्यतानिरूपितेतरभेदत्वावच्छिन्नविधेयताका पृथिवी इतरभेदवती इत्याकारकानुमितिर्जायत इति तत्त्वम् । **यथा जल-मिति।** जलमितरभेदाभावव्यापकगन्धाभाववदिति । **न चेयं तथेति।** इतर-भेदाभावव्यापकीभूतगन्धाभाववती न, किंतु तदभावाभाववत्त्वाद्गन्धवती-त्यर्थः । **तस्मान्न तथेति।** तच्छब्देन गन्धाभावाभावरूपस्य गन्धस्य परा-मर्शेन तस्मादिति पञ्चम्यन्ताद्गन्धवत्त्वादित्यर्थोपलब्धेस्तथेतरभेदाभावव-तीत्यस्यायं भावः । तथा चेतरभेदाभावाभाववतीतरभेदवतीत्यर्थः ॥

[४९]

संदिग्धसाध्यवान्पक्षः । यथा धूमवत्त्वे हेतौ पर्वतः ॥

त. दी.—पक्षलक्षणमाह—**संदिग्धेति** । ननु श्रवणानन्तरभावि-मननस्थलेऽव्याप्तिः । तत्र वेदवाक्यैरात्मनो निश्चितत्वेन संदेहाभावात्किं च प्रत्यक्षेऽपि वह्नौ यत्रेच्छयानुमितिस्तत्राप्यव्याप्तिरिति चेन्न । उक्तपक्ष-ताश्रयत्वस्य पक्षलक्षणत्वात् ॥

न्या. बो.—पक्षलक्षणमाह—**संदिग्धसाध्येति** । साध्यप्रकारक-संदेहविशेष्यत्वं पक्षत्वम् । संदेहश्च पर्वतो वह्निमान्न वा इत्याकारकः । अनु-मितेः पूर्वं साध्यसंदेहो नियमेन पक्षे जायत इत्यभिप्रायेणेदं लक्षणं प्राची-नैः कृतम् । गगनविशेष्यकमेघप्रकारकसंदेहाभावदशायामपि गृहमध्यस्थ-पुरुषस्य घनगर्जितश्रवणेन गगनं मेघवदित्याकारकानुमितिर्जायते । गग-नत्वावच्छिन्नोद्देश्यतानिरूपितमेघवत्त्वावच्छिन्नविधेयताकानुमितिदर्शना-त्प्राचीनमतं विहाय नवीनैरनुमित्युद्देश्यत्वं पक्षत्वमिति स्थिरीकृतम् ॥

[५०]

निश्चितसाध्यवान्सपक्षः । यथा तत्रैव महानसः ॥

त. दी.—सपक्षलक्षणमाह—**निश्चितेति** ॥

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1 The following passage seems to be corrupt. The reading of O, K is adopted. S U and W give a materially different reading.

न्या. बो.—सपक्षलक्षणमाह—**निश्चितसाध्येति**। साध्यप्रकारकनिश्चयविशेष्यत्वं सपक्षत्वम्। निश्चयश्च महानसो वह्निमानित्याकारकः॥

[५१]

निश्चितसाध्याभाववान्विपक्षः। यथा तत्रैव महाह्रदः॥

त. दी.—विपक्षलक्षणमाह—**निश्चितेति**॥

न्या. बो.—विपक्षलक्षणमाह—**निश्चितेति**। साध्याभावप्रकारकनिश्चयविशेष्यत्वं विपक्षत्वम्। निश्चयश्च ह्रदो वह्न्यभाववानित्याकारकः॥

[५२]

सव्यभिचारविरुद्धसत्प्रतिपक्षासिद्धबाधिताः पञ्च हेत्वाभासाः॥

त. दी.—एवं सद्धेतुं निरूप्यासद्धेतुं निरूपयितुं विभजते—**सव्यभिचारेति**। अनुमितिप्रतिबन्धकयथार्थज्ञानविषयत्वं हेत्वाभासत्वम्।

न्या. बो.—एवं सद्धेतून्निरूप्य हेत्वाभासान्निरूपयति—**सव्यभिचारेति**। हेतुवदाभासन्त इति हेत्वाभासाः दुष्टहेतव इत्यर्थः। दोषाश्च व्यभिचारविरोधप्रतिपक्षासिद्धिबाधाः। तद्विशिष्टा दुष्टहेतव इत्यर्थः। हेतौ दोषज्ञाने सत्यनुमितिप्रतिबन्धो जायते व्याप्तिज्ञानप्रतिबन्धो वा जायते। अतो वादिनिग्रहार्थं वादिनोद्भावितहेतौ दोषोद्भावनार्थं दुष्टहेतुनिरूपणमिति भावः॥

[५३]

सव्यभिचारोऽनैकान्तिकः। स त्रिविधः। साधारणासाधारणानुपसंहारिभेदात्। तत्र साध्याभाववद्वृत्तिः साधारणोऽनैकान्तिकः। यथा पर्वतो वह्निमान्प्रमेयत्वादिति प्रमेयत्वस्य वह्न्यभाववति ह्रदे विद्यमानत्वात्। सर्वसपक्षविपक्षव्यावृत्तोऽसाधारणः।

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1 O F K Q and V omit the sentence.

2 G J omit "विपक्ष"; Q inserts पक्षमात्रवृत्तिः before असाधारण.

यथा शब्दो नित्यः शब्दत्वादिति । शब्दत्वं सर्वेभ्यो नित्येभ्योऽनित्येभ्यश्च[1] व्यावृत्तं शब्दमात्रवृत्ति । अन्वयव्यतिरेकदृष्टान्तरहितोऽनुपसंहारी। यथा सर्वमनित्यं प्रमेयत्वादिति । अत्र सर्वस्यापि पक्षत्वाद्दृष्टान्तो नास्ति ॥

त. दी.—सव्यभिचारं विभजते—स त्रिविध इति। असाधारणं लक्षयति—तत्रेति। उदाहरति—यथेति। असाधारणं लक्षयति—सर्वेति। अनुपसंहारिणो लक्षणमाह—अन्वयेति ॥

न्या. बो.—सव्यभिचारं विभज्य दर्शयति—साधारणेति। साधारणाद्यन्यतमत्वं सव्यभिचारसामान्यलक्षणम्। साधारणत्वं साध्याभाववद्वृत्तित्वम्[2]। पर्वतो वह्निवान्प्रमेयत्वादित्यत्र प्रमेयत्वंहतौ वह्न्यभाववद्वृत्तित्वरूपव्यभिचारे ज्ञाते वह्न्यभाववद्वृत्तित्वरूपव्याप्तिग्रहप्रतिबन्धः फलम्। असाधारण इति। सर्वसपक्षविपक्षव्यावृत्तत्वम् साध्यवद्वृत्तित्वावच्छिन्नप्रतियोगिताकाभावः[3]।हेतौ साध्यासामानाधिकरण्ये निश्चित साध्यसामानाधिकरण्यरूपव्याप्तिज्ञानप्रतिबन्धः फलम्॥ अनुपसंहारिणं लक्षयति—अन्वयेति। उभयदृष्टान्ताभावादन्वयव्याप्तिज्ञानव्यतिरेकव्याप्तिज्ञानोभयसामग्री नास्तीत्यर्थः ।। सर्वस्यैव पक्षत्वात् पक्षातिरिक्ताप्रसिद्धेरितिभावः ॥

[५४]

साध्याभावव्याप्तो हेतुर्विरुद्धः । यथा शब्दो नित्यः कृतकत्वादिति । कृतकत्वं हि नित्यत्वाभावेनानित्यत्वेन व्याप्तम् ॥

त. दी.—विरुद्धं लक्षयति—साध्येति ॥

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1 G J omit अनित्येभ्यश्च.

2 The passage from सव्यभिचारं विभज्य to वृत्तित्वम् is not found in C K R V.

3 The sentence is omitted in C K R and V; U has निश्चितसाध्यवद्वृत्तित्वम्.

न्या. बो.—विरुद्धं लक्षयति—**साध्याभावव्याप्त** इति । साध्याभावव्याप्तिः साध्याभावनिरूपितव्यतिरेकव्याप्तिः साध्यव्यापकीभूताभावप्रतियोगित्वम् । तथा च पक्षविशेष्यकसाध्याभावव्याप्यहेतुप्रकारकज्ञानात्पक्षविशेष्यकसाध्यप्रकारकानुमितिप्रतिबन्धः फलम् ॥

[५५]

यस्य साध्याभावसाधकं हेत्वन्तरं विद्यते स सत्प्रतिपक्षः । यथा शब्दो नित्यः श्रावणत्वाच्छब्दत्ववदिति । शब्दोऽनित्यः कार्यत्वाद्घटवदिति ॥

त. दी.—सत्प्रतिपक्षं लक्षयति—**यस्येति** ॥

न्या. बो.—एवं सत्प्रतिपक्षेऽपि । विरुद्धसत्प्रतिपक्षयोर्विशेषस्तु विरुद्धे हेतोरेकत्वेन सत्प्रतिपक्षे हेतोर्द्वित्वेन च ज्ञातव्यः । सत्प्रतिपक्षं लक्षयति—**यस्येति** । साध्याभावसाधको हेतुः साध्यसाधकत्वेनोपन्यस्त इत्यसामर्थ्यसूचनमपि भवति ॥

[५६]

असिद्धस्त्रिविधः । आश्रयासिद्धः स्वरूपासिद्धो व्याप्यत्वासिद्धश्चेति । आश्रयासिद्धो यथा गगनारविन्दं सुरभ्यरविन्दत्वात्सरोजारविन्दवत् । अत्र गगनारविन्दमाश्रयः । स च नास्त्येव । स्वरूपासिद्धो यथा शब्दो गुणश्चाक्षुषत्वात् । अत्र चाक्षुषत्वं शब्दे नास्ति शब्दस्य श्रावणत्वात् । सोपाधिको व्याप्यत्वासिद्धः साध्यव्यापकत्वे सति साधनाव्यापक उपाधिः । साध्यसमानाधिकरणात्यन्ताभावाप्रतियोगित्वं साध्यव्यापकत्वम् । साधनवन्नि-

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1 A B place यस्य after हेत्वन्तरं, B omits विद्यते; G has विद्यते यस्य.

2 Q has अनित्यः for गुणः, and adds रूपवत्.

3 A B C D F and Q insert हेतुः after सोपाधिकः.

4 C H Q U and W have व्यापकत्वमुपाधिः, while E reads °व्यापकत्वमुपाधित्वम्.

छात्यन्ताभावप्रतियोगित्वं साधनाव्यापकत्वम् । पर्वतो धूमवान्वह्निमत्त्वादित्यत्रार्द्रेन्धनसंयोग उपाधिः । तथाहि[1] । यत्र धूमस्तत्रार्द्रेन्धनसंयोग इति साध्यव्यापकता । यत्र वह्निस्तत्रार्द्रेन्धनसंयोगो नास्त्ययोगोलक आर्द्रेन्धनसंयोगाभावादिति साधनाव्यापकता । एवं साध्यव्यापकत्वे सति साधनाव्यापकत्वादार्द्रेन्धनसंयोग उपाधिः । सोपाधिकत्वाद्वह्निमत्त्वं व्याप्यत्वासिद्धम् ॥

त. दी.—आसिद्धं विभजते—**असिद्ध** इति ॥ आश्रयासिद्धमुदाहरति—**गगनेति** ॥ स्वरूपासिद्धमुदाहरति—**शब्देति** ॥ व्याप्यत्वासिद्धस्य लक्षणमाह—**सोपाधिक** इति । उपाधिलक्षणमाह—**साध्येति** । उपाधिश्चतुर्विधः । केवलसाध्यव्यापकः पक्षधर्मावच्छिन्नसाध्यव्यापकः साधनावच्छिन्नसाध्यव्यापक उदासीनधर्मावच्छिन्नसाध्यव्यापकश्चेति । आद्य आर्द्रेन्धनसंयोगः । द्वितीयो यथा—वायुः प्रत्यक्षः प्रत्यक्षस्पर्शाश्रयत्वादित्यत्र[3] बहिर्द्रव्यत्वावच्छिन्नप्रत्यक्षत्वव्यापकमुद्भूतरूपवत्त्वम्[4] । तृतीयो यथा—प्रध्वंसो[5] विनाशी जन्यत्वादित्यत्र जन्यत्वावच्छिन्नानित्यत्वव्यापकं भावत्वम् । चतुर्थो यथा—प्रागभावो विनाशी प्रमेयत्वादित्यत्र जन्यत्वावच्छिन्नानित्यत्वव्यापकं भावत्वम् ॥

न्या. बो.—**आश्रयासिद्ध** इति । आश्रयासिद्धिर्नाम पक्षतावच्छेदकविशिष्टपक्षाप्रसिद्धिः । यथा गगनीयत्वविशिष्टपक्षासिद्धेः सौर-

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1 Some copies omit तथाहि.

2 C H K X and W omit इति साधनाव्यापकता.

3 For प्रत्यक्षस्पर्शाश्रयत्वात् C J L M Y Z read प्रमेयत्वात् which is perhaps better.

4 G here adds स श्यामो मैत्रीतनयत्वादित्यत्र मैत्रीतनयत्वावच्छिन्नश्यामत्वस्य व्यापकः शाकाद्याहारपरिणतिभेदः। प्रकारान्तरेण तृतीयो यथा; but this is undoubtedly interpolated.

5 J N M *Q* and Y read प्रागभावं for प्रध्वंस and are supported by the high authority of *Nil.* See Note *loc. cit.*

भ्यानुमितिर्न संभवति। स्वरूपासिद्धिर्नाम पक्षे हेत्वभावः। तथा च हेत्वभावविशिष्टपक्षज्ञानात्पक्षविशेष्यकहेतुप्रकारकपरामर्शानुत्पत्त्या परामर्शप्रतिबन्धः फलम् ॥ व्याप्यत्वासिद्ध इति। प्रकृते धूमव्यापकत्वमार्द्रेन्धने संयोगे गृहीतं चेद्धूम आर्द्रेन्धनसंयोगव्याप्यत्वं गृहीतम्। एवं वह्निव्यापकत्वमार्द्रेन्धनसंयोगे गृहीतं चेद्वह्नौ तद्व्याप्यत्वं गृह्यते तदेव व्यभिचरित्वम्। तथाचोपाधिव्यभिचारित्वं साधने गृहीतं चेदुपाधिभूतार्द्रेन्धनसंयोगव्याप्यधूमव्याभिचारित्वं गृहीतमेव। अनुमानप्रकारश्च पूर्वानुमानहेतुं पक्षीकृत्य वह्निर्धूमव्यभिचारी धूमव्यापकार्द्रेन्धनसंयोगव्यभिचारित्वाद्घटत्वादिवद्यो यत्साध्यव्यापकव्यभिचारी स सर्वोऽपि साध्यव्यभिचारी। एवं प्रकारेण प्रकृतानुमानहेतुभूतपक्षे साध्यव्यभिचारोत्थापकतया दूषकत्वमुपाधेः फलम्। तथा च धूमाभाववद्वृत्तित्वरूपधूमव्यभिचारे गृहीते वह्नौ धूमाभाववद्वृत्तित्वरूपव्याप्तिग्रहप्रतिबन्धः फलम्। न च व्याप्यत्वासिद्धेर्व्यभिचाराभेद इति वाच्यम्। धूमाभाववद्वृत्तित्वाभावाभावत्वेन व्याप्यत्वासिद्धत्वं धूमाभाववद्वृत्तित्वेन व्यभिचारत्वमिति भेदात् ॥

[५७]

यस्य साध्याभावः प्रमाणान्तरेण निश्चितः स बाधितः। यथा वह्निरनुष्णो द्रव्यत्वादिति। अत्रानुष्णत्वं साध्यं तदभाव उष्णत्वं स्पार्शनप्रत्यक्षेण गृह्यत इति बाधितत्वम् ॥

त. दी.—बाधितस्य लक्षणमाह—यस्येति। अत्र बाधस्य ग्राह्याभावनिश्चयत्वेन सत्प्रतिपक्षस्य विरोधिज्ञानसामग्रीत्वेन साक्षादनुमितिप्रति-

1 U and W read the passage differently.

2 G K R V omit the following two sentences.

3 K reads पदार्थत्वात् for द्रव्यत्वात्.

4 The reading adopted is that of A D E K; G H J read स्पार्शन only which amounts to the same. B has स्पर्शन प्रत्यक्षेण, and O स्पर्शनेन. Sc. seems to prefer the latter. Possibly both स्पार्शन and स्पर्शन may have been later insertions. See Note *loc. cit.*

बन्धकत्वम् । इतरेषां तु परामर्शप्रतिबन्धकत्वम् । तत्रापि साधारणस्याव्यभिचाराभावतया विरुद्धस्य सामानाधिकरण्याभावतया व्यापकत्वासिद्धस्य विशिष्टव्याप्त्यभावतयाऽसाधारणानुपसंहारिणोर्व्याप्तिसंशयाधायकत्वेन च व्याप्तिज्ञानप्रतिबन्धकत्वम् । आश्रयासिद्धस्वरूपासिद्ध्योः पक्षधर्मताज्ञानप्रतिबन्धकत्वम् । उपाधिस्तु व्यभिचारज्ञानद्वारा व्याप्तिज्ञानप्रतिबन्धकः। सिद्धसाधनं तु पक्षताविघटतया आश्रयासिद्धेऽन्तर्भवतीति प्राञ्चः । निग्रहस्थानान्तरमिति नवीनाः ।

न्या. बो.—यस्येति । यस्य हेतोः साध्याभावः स च प्रमाणान्तरेण निश्चितः स बाधित इत्यर्थः । तथा च प्रात्यक्षिकसाध्याभावनिश्चयेन साध्यानुमितिप्रतिबन्धः फलम् । बाधितसाध्यकत्वाद्धेतोर्हेतुरपि बाधित इत्युच्यते ॥ इत्यनुमानपरिच्छेदः ॥

[५८]

उपमितिकरणमुपमानम् । संज्ञासंज्ञिसंबन्धज्ञानमुपमितिः। तत्करणं सादृश्यज्ञानम् । अतिदेशवाक्यार्थस्मरणमवान्तरव्यापारः[3] । तथाहि कश्चिद्[4]गवयशब्दार्थमजानन्कुतश्चिदारण्यकपुरुषाद्गोसदृशो गवय इति[5] श्रुत्वा, वनं गतो, वाक्यार्थं स्मरन्गोसदृशं[6] पिण्डं पश्यति। तदनन्तरमसौ गवयशब्दवाच्य इत्युपमितिरुत्पद्यते ॥

त. दी.—उपमानं लक्षयति—**उपमितीति** ॥

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1 A and Q °भाववत्तया.

2 The reading is that of N and *Nil.* A C L P omit प्राञ्चः leaving इति which then becomes redundant. G J Y Z omit इति प्राञ्चः. A inserts न before निग्रह° and M reads निग्रहस्थानानन्तरम् both of which are clearly wrong.

3 Q N and W omit this sentence. F omits the rest of the passage.

4 A B D omit कश्चित्; K adds पुरुषः; A B D and Q read वाच्यम् for अर्थम्. N has पदार्थं for शब्दार्थम्.

5 K H add वाक्यं after इति.

6 C adds विशिष्टं after सदृशं; H reads सादृश्यविशिष्टं and A and W सदृशपिण्डं; J omits पिण्डं.

न्या. बो.—उपमानं लक्षयति **उपमितिकरणमिति** । उपमितिं लक्षयति—**संज्ञासंज्ञीति** । संज्ञा पदं । संज्ञी पदार्थः । तयोः संबन्धः शक्तिः । तथा च पदपदार्थसंबन्धज्ञानमुपमितिरित्यर्थः । उपमानमतिदेशवाक्यार्थज्ञानम् । अतिदेशवाक्यार्थस्मरणं व्यापारः । उपमितिः फलम् । गोसदृशो गवयपदवाच्य इत्याकारकाद्गोसदृशत्वावच्छिन्नविशेष्यकगवयपदवाच्यत्वप्रकारकं ज्ञानं जायते तदेव करणम् ॥ इत्युपमानपरिच्छेदः ॥

[५९]

आप्तवाक्यं शब्दः । आप्तस्तु यथार्थवक्ता । वाक्यं पदसमूहः । यथा गामानयेति । शक्तं पदम् । अस्मात्पदादयमर्थो बोद्धव्य इतीश्वरसंकेतः शक्तिः ॥

त. दी.—शब्दं लक्षयति—**आप्तेति**[3] । पदलक्षणमाह—**शक्तमिति** । अर्थस्मृत्यनुकूलः पदपदार्थसंबन्धः शक्तिः । सा च पदार्थान्तरमिति मीमांसकाः । तन्निरासार्थमाह—**अस्मादिति** । डित्थादीनामिव घटादीनामपि संकेत एव शक्तिः, न तु पदार्थान्तरमित्यर्थः ॥ गवादिशब्दानां जातावेव शक्तिर्विशेषणतया जातेः प्रथममुपस्थितत्वात् व्यक्तिलाभस्त्वाक्षेपादिना इति केचित् । तन्न, गामानयेत्यादौ वृद्धव्यवहारात्सर्वत्रानयनादेर्व्यक्तावेव संभवेन जातिविशिष्टव्यक्तावेव शक्तिकल्पनात् । शक्तिग्रहश्च वृद्धव्यवहारेण । व्युत्पित्सुर्बालो गामानयेत्युत्तमवृद्धवाक्यश्रवणान्तरं मध्यमवृद्धस्य प्रवृत्तिमुपलभ्य गवानयनं च दृष्ट्वा मध्यमवृद्धप्रवृत्तिजनकज्ञानस्यान्वयव्यतिरेकाभ्यां वाक्यजन्यत्वं निश्चित्याश्वमानय गां बधान इति वाक्यांतर आवापोद्वापाभ्यां गोपदस्य गोत्वविशिष्टे शक्तिरश्वशब्दस्याश्वत्वविशिष्टे शक्तिरिति व्युत्पद्यते । ननु सर्वत्र कार्यपरत्वाद्व्यवहारस्य कार्यवाक्य एव व्युत्पत्तिर्न सिद्धपर इति चेन्न । काञ्च्यां त्रिभुवनतिलको भूपतिरित्यादौ

1 W omits this. Q adds शुक्लां दण्डेन after आनय.

2 A B. D and F insert इच्छा after ईश्वर unnecessarily. O more correctly reads ईश्वरेच्छारूपसंकेतः.

3 N and Q here add वाक्यं लक्षयति-वाक्येति.

4 F and Q have वृद्धव्यवहारेण.

5 A and M read काश्यां.

सिद्धेऽपि व्यवहारात्,विकासितपद्मे मधुकर[1] इत्यादौ प्रसिद्धपदसमभिव्यवहारात्सिद्धेऽपि मधुकरादिपदे व्युत्पत्तिदर्शनाच्च ॥ लक्षणापि शब्दवृत्तिः। शक्यसंबंधो लक्षणा। गङ्गायां घोष इत्यत्र गङ्गापदवाच्यप्रवाहसंबन्धादेव तीरोपस्थितौ तीरेऽपि शक्तिर्न कल्प्यते। सैन्धवादौ लवणाश्वयोः परस्परसंबन्धाभावान्नानाशक्तिकल्पनम् ॥ लक्षणा त्रिविधा। जहल्लक्षणाऽजहल्लक्षणा जहदजहल्लक्षणा चेति। यत्र वाच्यार्थस्यान्वयाभावस्तत्र जहती, यथा मञ्चाः क्रोशन्तीति। यत्र वाच्यार्थस्यान्वयस्तत्राजहती, यथा छत्रिणो गच्छन्तीति। यत्र वाच्यैकदेशत्यागेनैकदेशान्वयस्तत्र जहदजहती यथा तत्त्वमसीति[2]। गौण्यपि लक्षणैव लक्ष्यमाणगुणसंबन्धरूपा। अग्निर्माणवक इति ॥ व्यञ्जनापि शक्तिलक्षणान्तर्भूता। अर्थशक्तिमूला चानुमानादिनान्यथासिद्धा[3] ॥

तात्पर्यानुपपत्तिर्लक्षणाबीजम्। तत्प्रतीतीच्छयोच्चरितत्वं तात्पर्यम्। तात्पर्यज्ञानं च वाक्यार्थज्ञाने हेतुः। नानार्थानुरोधात्तु प्रकरणादिकं तात्पर्यग्राहकम्। द्वारमित्यादौ पिधेहीति शब्दाध्याहारः। नन्वर्थज्ञानार्थत्वाच्छब्दस्यार्थमविज्ञाय शब्दाध्याहारासंभवादर्थाध्याहार एव युक्त इति चेन्न, पदविशेषजन्यपदार्थोपस्थितेः शाब्दज्ञानहेतुत्वात्। अन्यथा घटः कर्मत्वमानयनं कृतिरित्यत्रापि शाब्दज्ञानप्रसङ्गात् ॥

पङ्कजादिपदेषु योगरूढिः। अवयवशक्तिर्योगः। समुदायशक्ती रूढिः। नियतपद्मत्वज्ञानार्थं समुदायशक्तिः। अन्यथा कुमुदेऽपि प्रयोगप्रसङ्गः। इतरान्विते शक्तिरिति प्राभाकराः। अन्वयस्य वाक्यार्थतया भानसंभवादन्वयांशेऽपि शक्तिर्न कल्पनीयेति गौतमीयाः ॥

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1 M N F and Q add मधूनि पिबति after मधुकरः but wrongly; J supplies the ellipsis by तिष्ठति more correctly. A reads सिद्ध for प्रसिद्ध incorrectly.

2 G here adds सोऽयं देवदत्त इति च.

3 The text of T D is here undoubtedly tampered with. J alone gives the reading adopted, which seems to be the correct one as it is supported by *Nil.* A L omit शक्ति before लक्षणान्तर्भूता. A L C P make अर्थशक्तिमूला च part of the previous sentence. F N and Q add शब्दशक्तिमूला before and M पदशक्तिमूला after अर्थशक्तिमूला. Q V Z make the two sentences one. Y Z have भूतत्वात् and मूलत्वात् for भूता and मूला respectively.

न्या. बो.—शब्दं लक्षयति—आप्तेति[1]। पदज्ञानं करणम्। वृत्तिज्ञानसहकृतपदज्ञानजन्यपदार्थोपस्थितिर्व्यापारः। वाक्यार्थज्ञानं शाब्दबोधः फलम्। वृत्तिर्नाम शक्तिलक्षणान्यतररूपा। शक्तिर्नाम घटादिविशेष्यकघटादिपदजन्यबोधविषयत्वप्रकारकेश्वरसंकेतः। ईश्वरसंकेतो नामेश्वरेच्छा सैव शक्तिरित्यर्थः। शक्तिनिरूपकत्वमेव पदे शक्तत्वम्। विषयतासंबन्धेन शक्त्याश्रयत्वमर्थे शक्यत्वम्। शक्यसंबन्धो लक्षणा। सा द्विविधा। गौणी शुद्धा चेति। गौणी नाम सादृश्यविशिष्टलक्षणा यथा सिंहो माणवक इत्यादौ सिंहपदस्य सिंहसादृश्यविशिष्टे लक्षणा। शुद्धापि द्विधा जहल्लक्षणाऽजहल्लक्षणा चेति[3]। लक्ष्यतावच्छेदकरूपेण लक्ष्यमात्रबोधिका जहल्लक्षणा यथा गङ्गायां घोष इत्यत्र गङ्गापदशक्यप्रवाहसंबन्धस्य तीरे सत्त्वात्, तादृशशक्यसंबन्धरूपलक्षणाज्ञानात् गङ्गापदात्तीरोपस्थितिः। लक्ष्यतावच्छेदकरूपेण लक्ष्यशक्योभयबोधप्रयोजिकाऽजहल्लक्षणा। यथा काकेभ्यो दधि रक्ष्यतामित्यत्र काकपदस्य दध्युपघातके लक्षणा। लक्ष्यतावच्छेदकं दध्युपघातकत्वं, तेन रूपेण दध्युपघातकानां काकबिडालकुक्कुटसारमेयादीनां शक्यलक्ष्याणां सर्वेषां बोधात्। जहदजहल्लक्षणा वेदान्तिनां मते[4]॥

[६०]

आकाङ्क्षा योग्यता संनिधिश्च वाक्यार्थज्ञानहेतुः। पदस्य पदान्तरव्यतिरेकप्रयुक्तान्वयाननुभावकत्वमाकाङ्क्षा। अर्थाबाधो योग्यता। पदानामविलम्बेनोच्चारणं संनिधिः॥

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1 S T and W insert here six sentences explaining the पदकृत्य of the definition of शब्दः but they are absent in older Mss. U prints them in brackets as an interpolation.

2 The reading is that of U V and K. K omits शक्तिर्नाम, and T and W omit घटादिविशेष्यक; while C reads simply शक्तिर्नामेश्वरेच्छा। सैव शक्तिरित्यर्थः.

3 S T and W read त्रिविधा for द्विविधा and add जहदजहल्लक्षणा as a third species.

4 In the place of this short sentence S T and W have शक्यतावच्छेदकपरित्यागेन व्यक्तिमात्रबोधनाज्जहदजहल्लक्षणा। इयं च लक्षणा जीवब्रह्मणोरैक्यं वदतां वेदान्तिनां सिद्धान्तरीत्या.

त. दी.—**आकाङ्क्षेति**। आकाङ्क्षादिज्ञानमित्यर्थः। अन्यथाकाङ्क्षादिभ्रमाच्छाब्दभ्रमो न स्यात्। आकाङ्क्षां लक्षयति—**पदस्येति** ॥ योग्यतालक्षणमाह—**अर्थेति** ॥ संनिधिलक्षणमाह—**पदानामिति**। अविलम्बेन पदार्थोपस्थितिः संनिधिः। उच्चारणं तु तदुपयोगितया युक्तम् ॥

न्या. बो.—**आकाङ्क्षेति**। अव्यवहितोत्तरत्वादिसंबन्धेन[1] यत्पदे यत्पदप्रकारज्ञानव्यतिरेकप्रयुक्तो यादृशशाब्दबोधाभावस्तादृशशाब्दबोधे तत्पदे तत्पदवत्त्वमाकाङ्क्षा[2]। तादृशाकाङ्क्षाज्ञानं शाब्दबोधे कारणम् ॥ **अर्थाबाध इति**। बाधाभावो योग्यतेत्यर्थः ॥

[६१]

आकाङ्क्षादिरहितं वाक्यमप्रमाणम्। यथा गौरश्वः पुरुषो हस्तीति न प्रमाणमाकाङ्क्षाविरहात्। अग्निना सिञ्चेदिति न प्रमाणं योग्यताविरहात्। प्रहरे प्रहरेऽसहोच्चारितानि गामानयेत्यादिपदानि न प्रमाणं सांनिध्याभावात्[3] ॥

त. दी.—**गौरश्व** इति। घटः कर्मत्वमित्यनाकाङ्क्षोदाहरणं द्रष्टव्यम् ॥

न्या. बो.—**अग्निना सिञ्चेदिति**। अत्र सेककरणत्वस्य जलादिधर्मस्य वह्नौ बाधनिश्चयसत्त्वान्न तादृशवाक्याच्छाब्दबोधः संभवति ॥ सान्निधिं निरूपयति—**असहोच्चारितानीति** ॥ असहोच्चारितानि विलम्बेनोच्चारितानि ॥

[६२]

वाक्यं द्विविधम्। वैदिकं लौकिकं च। वैदिकमीश्वरोक्तत्वात्सर्वमेव प्रमाणम्। लौकिकं त्वाप्तोक्तं प्रमाणम्। अन्यदप्रमाणम् ॥

त. दी.—वाक्यं विभजते—**वाक्यमिति**। वैदिकस्य विशेषमाह—

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1 R prefixes यत्पदविशेष्यक to अव्यवहित°.

2 S U and W here insert a long explanation of आकांक्षा.

3 O H read संनिध्यभावात् perhaps better.

वैदिकमीश्वरोक्तत्वादिति । ननु वेदस्यानादित्वात्कथमीश्वरोक्तत्वमिति चेन्न । वेदः पौरुषेयो वाक्यसमूहत्वाद्भारतादिवत्[1] । न च स्मर्यमाणकर्तृत्वमुपाधिः । गौतमादिभिः शिष्यपरंपरया वेदेऽपि कर्तृस्मरणेनेन[2] साधनव्यापकत्वात् । "तस्मात्तेपानात्त्रयो वेदा अजायन्त"[3] इति श्रुतेश्च ॥

ननु वर्णा नित्याः 'स एवायं गकार' इति प्रत्यभिज्ञाबलात् । तथा च कथं वेदस्यानित्यत्वमिति चेन्न, उत्पन्नो गकारो नष्टो गकार इति प्रतीत्या वर्णानामनित्यत्वात्'सोऽयं गकार' इति प्रत्यभिज्ञायाः सेऽयं दीपज्वालेतिवत्साजात्यावलम्बनत्वात्[4], वर्णानां नित्यत्वेऽप्यानुपूर्वीविशिष्टवाक्यस्यानित्यत्वाच्च । तस्मादीश्वरोक्तो वेदः ॥ मन्वादिस्मृतीनामाचाराणां च वेदमूलकतया प्रामाण्यम् । स्मृतिमूलवाक्यानामिदानीमनध्ययनात्तन्मूलभूता काचिच्छाखोच्छिन्नेति कल्प्यते । ननु पठ्यमानवेदवाक्योत्सादस्य कल्पयितुमशक्यतया विप्रकीर्णवादस्यायुक्तत्वान्नित्यानुमेयो वेदो मूलमिति चेन्न । तथापि[5] वर्णानुपूर्वीज्ञानाभावेन बोधकत्वासंभवात् ॥

न्या. बो.—वैदिकं लौकिकं चेति ॥ वैदिकं वेदवाक्यमित्यर्थः । इदमुपलक्षणम् । वेदमूलकस्मृत्यादीन्यपि ग्राह्याणि । **लौकिकमिति** । वेदवाक्यभिन्नमित्यर्थः । आप्तत्वं प्रयोगहेतुभूते यथार्थज्ञानवत्त्वम् ॥ इति शब्दपरिच्छेदः ॥

[६३]

वाक्यार्थज्ञानं शाब्दज्ञानम् । तत्करणं शब्दः ॥

त. दी.—नन्वेतानि पदानि स्वस्मारितार्थसंसर्गवन्ति आकाङ्क्षादिमत्पदकदम्बकत्वात्, सद्वाक्यवदित्यनुमानादेव संसर्गज्ञानसंभवाच्छब्दो न प्रमाणांतरमिति चेन्न[6] । अनुमित्यपेक्षया शाब्दज्ञानस्य विलक्षणस्य शब्दात्प्रत्येमीत्यनुव्यवसायसाक्षिकस्य सर्वसंमतत्वात्[7] ॥

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1 N F and Q here add इत्यनुमानेन पौरुषेयत्वसिद्धेः; Z adds इत्यनुमानात्.

2 A reads कर्तुः स्मर्यमाणत्वेन; N F and Q have सकर्तृकत्वस्मरणेन

3 Q inserts तपः before तेपानात्.

4 This is the reading of L and M; O J N P Y Z have the same without सा before जात्या°; A reads सोऽयं दीप इति प्रत्यभिज्ञानवज्जात्यालम्बनत्वात्.

5 A and F have तथा सति for तथापि.

6 K R and V omit this sentence, while S and W omit the next.

7 F and Q insert here शाब्दानुभवेन इति महावाक्य°.

नन्वर्थापत्तिरपि प्रमाणान्तरमस्ति 'पीनो देवदत्तो दिवा न भुङ्क्ते' इति दृष्टे श्रुते वा पीनत्वान्यथानुपपत्त्या रात्रिभोजनमर्थापत्त्या कल्प्यत इति चेन्न । देवदत्तो रात्रौ भुङ्क्ते दिवाऽभुञ्जानत्वे सति पीनत्वादित्यनुमानेनैव रात्रिभोजनस्य सिद्धत्वात्[1] । शते पञ्चाशदिति संभवोऽप्यनुमानमेव । इह वटे यक्षस्तिष्ठतीत्यैतिह्यमज्ञातमूलवक्तृकः शब्द एव । चेष्टापि शब्दानुमानद्वारा व्यवहारहेतुरिति न मानान्तरम् । तस्मात्प्रत्यक्षानुमानोपमानशब्दाश्चत्वार्येव प्रमाणानि ॥

सर्वेषां ज्ञानानां तद्वति तत्प्रकारकत्वं स्वतो ग्राह्यं परतो वेति विचार्यते । तत्र विप्रतिपत्तिः। ज्ञानप्रामाण्यं तदप्रामाण्याग्राहकयावज्ज्ञानग्राहकसामग्रीग्राह्यं न वा । अत्र विधिकोटिः स्वतस्त्वम् । निषेधकोटिः परतस्त्वम् ॥ अनुमानग्राह्यत्वेन सिद्धसाधनतावारणाय यावदिति । 'इदं ज्ञानमप्रमेति' ज्ञानेन प्रामाण्यग्रहाद्बाधवारणायाप्रामाण्याग्राहकेति ।इदं ज्ञानमप्रमेत्यनुव्यवसायनिष्ठप्रामाण्यग्राहकस्याप्रामाण्याग्राहकत्वाभावात्स्वतस्त्वं न स्यादतस्तदिति । तस्मिन्प्रामाण्याश्रयेऽप्रामाण्यग्राहक इत्यर्थः । उदाहृतस्थले व्यवसायेऽप्रामाण्यग्राहकस्याप्यनुव्यवसाये तद्ग्राहकत्वात्स्वतस्त्वासिद्धिः ॥ ननु स्वत एव प्रामाण्यं गृह्यते, घटमहं जानामीत्यनुव्यवसायेन घटघटत्वयोरिव तत्संबन्धस्यापि विषयीकरणात्, व्यवसायरूपप्रत्यासत्तेस्तुल्यत्वात्, पुरोवर्तिनि प्रकारसंबन्धस्यैव प्रमात्वपदार्थत्वादिति चेन्न । स्वतःप्रामाण्यग्रहे जलज्ञानं प्रमा न वेत्यनभ्यासदशायां प्रमात्वसंशयो न स्यात् । अनुव्यवसायेन प्रामाण्यस्य निश्चितत्वात् । तस्मात्स्वतोग्राह्यत्वाभावात्परतो ग्राह्यत्वम् । तथाहि । प्रथमं जलज्ञानानन्तरं प्रवृत्तौ सत्यां, जललाभे सति पूर्वोत्पन्नं जलज्ञानं प्रमा समर्थप्रवृत्तिजनकत्वात्, यन्नैवं तन्नैवम्, यथा प्रमा, इति व्यतिरेकिणा प्रमात्वं निश्चीयते।

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1 A here adds अनुपलब्धिर्न मानम् । परिशेषोपि अनुमानमेव, but the words seem to be spurious as no other copy contains them. They are also superfluous, as अनुपलब्धि has already once been referred to, while it is doubtful whether परिशेष is recognized as an independent proof.

द्वितीयादिज्ञानेषु पूर्वज्ञानदृष्टान्तेन तत्सजातीयत्वलिङ्गेनान्वयव्यतिरेकिणाऽपि गृह्यते ॥

प्रमाया गुणजन्यत्वमुत्पत्तौ परतस्त्वम् । प्रमाऽसाधारणकारणं गुणः। अप्रमाऽसाधारणकारणं दोषः । तत्र प्रत्यक्षे विशेषणवद्विशेष्यसंनिकर्षो गुणः, अनुमितौ व्यापकवति व्याप्यज्ञानं, उपमितौ यथार्थसादृश्यज्ञानं, शाब्दज्ञाने यथार्थयोग्यताज्ञानम् इत्याद्यूहनीयम् । पुरोवर्तिनि प्रकाराभावस्य व्यवसायेनानुपस्थितत्वादप्रमात्वं परत एव गृह्यते । पित्तादिदोषजन्यत्वादुत्पत्तौ परतस्त्वम् ॥

ननु सर्वज्ञानानां यथार्थत्वादयथार्थज्ञानमेव नास्ति । न च 'शुक्ताविदं रजतमिति' ज्ञानात्प्रवृत्तिदर्शनादन्यथाख्यातिसिद्धिरिति वाच्यम् । रजतस्मृतिपुरोवर्तिज्ञानाभ्यामेव प्रवृत्तिसंभवात् उपस्थितेष्टभेदाग्रहस्यैव सर्वत्र प्रवर्तकत्वेन नेदं रजतमित्यादावतिप्रसङ्गाभावादिति चेन्न । सत्यरजतस्थले पुरोवर्तिविशेष्यकरजतत्वप्रकारकज्ञानस्य लाघवेन प्रवृत्तिजनकतया शुक्तावपि रजतार्थिप्रवृत्तिजनकत्वेन विशिष्टज्ञानस्यैव कल्पनात् ॥

[६४]

अयथार्थानुभवस्त्रिविधः संशयविपर्ययतर्कभेदात् । एकस्मिन्धर्मिणि विरुद्धनानाधर्मवैशिष्ट्यावगाहि ज्ञानं संशयः[1] । यथा स्थाणुर्वा पुरुषो वेति । मिथ्याज्ञानं विपर्ययः । यथा शुक्ताविदं रजतमिति । व्याप्यारोपेण व्यापकारोपस्तर्कः । यथा यदि वह्निर्न स्यात्तर्हि धूमोऽपि न स्यादिति[2] ॥

त. दी.—अयथार्थानुभवं विभजते—**अयथार्थेति**। स्वप्नस्य मानसविपर्ययरूपत्वान्न त्रैविध्यविरोधः ॥ संशयलक्षणमाह-**एकस्मिन्निति**। 'घटपटा'विति समूहालम्बनेऽतिव्याप्तिवारणाय एकेति।'घटो द्रव्य'मित्यादाव-

1 The passage is variously worded in different copies. The reading in the text is that of A B D F U and Sc; C G H Q and W have °**वैशिष्ट्यज्ञानम्**, while B J read °**विशिष्टज्ञानम्**. E differs from all in giving **विरुद्धनानाकोटिकं ज्ञानम्**.

2 X has **यथायं निर्वह्निः स्यात्तर्हि निर्धूमोपि स्यात्**.

तिव्याप्तिवारणाय-**विरुद्धे**ति । ' पटत्वविरुद्धघटत्ववानि' त्यत्रातिव्याप्तिवारणाय **नाने**ति ॥ विपर्ययलक्षणमाह—**मिथ्ये**ति । तदभाववति तत्प्रकारकनिश्चय इत्यर्थः ॥ तर्कं लक्षयति—**व्याप्ये**ति । यद्यपि तर्को विपर्ययेऽन्तर्भवति तथापि प्रमाणानुग्राहकत्वाद्भेदेन कीर्तनम् ॥

न्या. बो.—यथार्थानुभवं निरूप्यायथार्थानुभवं विभजते—**संशये**त्यादिना । **एके**ति । एकधर्मावच्छिन्नविशेष्यतानिरूपितभावाभावप्रकारकं ज्ञानं संशय इत्यर्थः । भावद्वयकोटिकसंशयप्रसिद्धेः स्थाणुर्वेत्यत्र स्थाणुत्वस्थाणुत्वाभावपुरुषत्वपुरुषत्वाभावकोटिकः संशय इत्यर्थः[1] । विपर्ययो नाम भ्रम इत्यर्थः ॥ **व्याप्यारोपेणे**ति । तर्के व्याप्यस्य व्यापकस्य च व्यतिरेक[2]निश्चयः कारणम् । अन्यथाबाधनिश्चयाभाव इष्टापत्तिदोषे तर्कानुत्पत्तेः ॥

[६५]

स्मृतिरपि द्विविधा[3] । यथार्थाऽयथार्था च । प्रमाजन्या यथार्था । अप्रमाजन्याऽयथार्था ॥

त. दी.—स्मृतिं विभजते—**स्मृतिरि**ति ॥

[६६]

सर्वेषामनुकूलतया वेदनीयं सुखम्[4] ॥

1 C K V omit this sentence, but as besides S T it is found in R also in a slightly different form, it is retained. The sentence as it stands in both S and R is corrupt and is therefore amended as above. S reads स्थाणुर्वेत्यादेः which is not intelligible, while R inserts एक before last कोटिक quite superfluously.

2 U and W read बाध for व्यतिरेक.

3 E H J K omit द्विविधा and join the two sentences. K adds इति after च.

4 It is impossible to ascertain the true reading of this and the next passage. A B C H J U and Q together with Sc. and Vv agree in reading अनुकूलवेदनीयं and प्रतिकूलवेदनीयं respectively; while the other variants अनुकूलतया and प्रतिकूलतया वेदनीयं are found in D E G K, as well as *Nil.* I have adopted the latter as being grammatically more correct, and being supported by the high authority of *Nil.*

त. दी.—सुखं लक्षयति—**सर्वेषामिति** । सुख्यहमित्याद्यनुव्यवसायगम्यं सुखत्वादिकमेव लक्षणम् । यथाश्रुतं तु स्वरूपकथनमिति द्रष्टव्यम् ॥

न्या. बो.—सुखं निरूपयति—**सर्वेषामिति**। इतरेच्छाऽनधीनेच्छाविषयत्वमिति निष्कर्षः । यथाश्रुतेऽनुकूलत्वप्रकारकवेदनाविशेष्यत्वस्य घटोऽनुकूल इत्याकारकज्ञानदशायामनुकूलत्वप्रकारकज्ञानाविशेष्यत्वस्य घटादावपि सत्त्वाद्घटादावतिव्याप्तिरिति निष्कृष्टलक्षणमुक्तम् । भोजनादावतिव्याप्तिवारणायेतरेच्छानधीनेच्छाविशेषणम् । सुखेच्छायाः सुखत्वप्रकारकज्ञानमात्रजन्यत्वात् ॥

[६७]

सर्वेषां प्रतिकूलतया वेदनीयं दुःखम् ॥

न्या. बो.—दुःखं निरूपयति—**प्रतिकूलेति** । अत्रापीतरद्वेषानधीनद्वेषविषयत्वमिति निष्कृष्टलक्षणम् । द्वेषविषयत्वमात्रोक्तौ सर्पादावपि द्वेषविषयत्वसत्वात्तत्रातिव्याप्तिवारणायेतरद्वेषानधीनेति द्वेषविशेषणम् । सर्पजन्यदुःखादौ द्वेषात्सर्पद्वेष इति सर्पद्वेषस्य सर्पजन्यदुःखद्वेषजन्यत्वादन्यद्वेषानधीनद्वेषविषयत्वरूपलक्षणस्य सर्पादावसत्त्वान्नातिव्याप्तिः । फलेच्छोपायेच्छां प्रति कारणं। अतः फलेच्छावशादुपायेच्छा भवति । एवं फलद्वेषादुपायद्वेषः ॥

[६८]

इच्छा कामः ॥

[६९]

क्रोधो द्वेषः ॥

[७०]

कृतिः प्रयत्नः ॥

[७१]

विहितकर्मजन्यो धर्मः[1] ॥

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1 K inserts गुणः after °जन्यः | unnecessarily.

[७२]

निषिद्धकर्मजन्यस्त्वधर्मः ॥

न्या. बो.—धर्माधर्मौ निरूपयति—**विहितेति**। वेदविहितेत्यर्थः। **निषिद्धेति** । वेदनिषिद्धेत्यर्थः ॥

[७३]

बुद्ध्यादयोऽष्टावात्ममात्रविशेषगुणाः ॥

[७४]

बुद्धीच्छाप्रयत्ना द्विविधाः । नित्या अनित्याश्च । नित्या ईश्वरस्य । अनित्या जीवस्य ॥

[७५]

संस्कारस्त्रिविधः । वेगो भावना स्थितिस्थापकश्चेति । वेगः पृथिव्यादिचतुष्टयमनोवृत्तिः । अनुभवजन्या स्मृतिहेतुर्भावनाऽत्ममात्रवृत्तिः । अन्यथा कृतस्य पुनस्तदवस्थापादकः स्थितिस्थापकः कटादिपृथिवीवृत्तिः ॥

त. दी.—संस्कारं विभजते—**संस्कार** इति । संस्कारत्वजातिमान्संस्कारः । वेगस्याश्रयमाह—**वेग** इति । वेगत्वजातिमान्वेगः । भावनां लक्षयति—**अनुभवेति** । आत्मादावतिव्याप्तिवारणायानुभवेति । अनुभवध्वंसेऽतिव्याप्तिवारणाय **स्मृतीति** । स्मृतेरपि संस्कारजनकत्वं नवीनैरुक्तम् ॥ स्थितिस्थापकं लक्षयति—**अन्यथेति** ॥ संख्यादयोऽष्टौ नैमित्तिकद्रवत्ववेगस्थितिस्थापकाः सामान्यगुणाः । अन्ये रूपादयो विशेष-

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1 C and X read आत्मनो विशेष°, and K आत्मनि विशेष°; D omits विशेष.

2 G J Q U W X omit द्विविधाः and join the two sentences.

3 C K read स्थितस्थापकः.

4 E J X have वेगाख्यः; D G X insert मात्र after मनः.

5 D H J read तादवस्थ्यापादकः; C and Sc. have तद्वत्स्थापकः.

गुणाः । द्रव्यविभाजकोपाधिद्वयसमानाधिकरणावृत्ति-द्रव्यकर्मावृत्ति-जातिमत्त्वं विशेषगुणत्वम् ॥

न्या. बो.—संस्कारं विभजते—**संस्कार** इति । भावनां लक्षयति । **अनुभवे**ति । अनुभवजन्यत्वे सति स्मृतिहेतुत्वं भावनाया लक्षणम् । अत्रानुभवजन्यत्वे सतीति विशेषणानुपादाने आत्ममनःसंयोगेऽतिव्याप्ति-रात्ममनःसंयोगस्य ज्ञानमात्रं प्रत्यसमवायिकारणत्वेन स्मृतिं प्रत्यपि कारणत्वादतस्तदुपादानम् । आत्ममनःसंयोगस्यानुभवजन्यत्वाभावान्नातिव्याप्तिः । तावन्मात्रे कृतेऽनुभवध्वंसेऽतिव्याप्तिः, ध्वंसं प्रति प्रतियोगिनः कारणत्वेनानुभवध्वंसस्याप्यनुभवजन्यत्वात् । अतः स्मृतिहेतुत्वोपादानम् । अनुभवध्वंसे स्मृतिहेतुत्वाभावान्नातिव्याप्तिः ॥

[७६]

चलनात्मकं कर्म । ऊर्ध्वदेशसंयोगहेतुरुत्क्षेपणम् । अधोदेश-संयोगहेतुरपक्षेपणम् । शरीरसंनिकृष्टसंयोगहेतुराकुञ्चनम् । विप्र-कृष्टसंयोगहेतुः प्रसारणम् । अन्यत्सर्वं गमनम् । पृथिव्यादिचतु-ष्टयमनोमात्रवृत्ति ॥

त. दी.—कर्मणो लक्षणमाह—**चलने**ति । उत्क्षेपणादीनां कार्य-भेदमाह—**ऊर्ध्वे**ति । **शरीरे**ति । वक्रत्वसंपादकमाकुञ्चनम् । ऋजुता-संपादकं प्रसारणमित्यर्थः ॥

[७७]

नित्यमेकमनेकानुगतं सामान्यं । द्रव्यगुणकर्मवृत्ति । तद्द्विविधं परापरभेदात् । परं सत्ता । अपरं द्रव्यत्वादिः ॥

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1 Instead of द्रव्यकर्मावृत्ति N has गुणवृत्ति. Z adds गुण after जाति-मत्. Other copies omit the word altogether, but wrongly.

2 K adds तत्पञ्चविधम्.

3 A B D have शरीरस्य. E H J X insert शरीर before विप्रकृष्ट also in the next sentence.

4 K omits मात्र; G J add कर्म after वृत्ति, perhaps better; Q U and W omit the whole sentence.

5 C E G J Q U X and W omit तद्द्विविधं परापरभेदात्. X has instead परमधिकवृत्ति । अपरं न्यूनवृत्ति । H has परमपरं चेति for परापरभेदात्, before द्रव्यगुण-कर्मवृत्ति. A B D F insert जातिः before द्रव्यत्वादिः.

त. दी.—सामान्यं लक्षयति—**नित्यमिति** । संयोगादावतिव्याप्तिवारणाय **नित्यमिति**[1] । परमाणुपरिमाणादावतिव्याप्तिवारणाय—**अने-केति** । अनुगतत्वं समवेतत्वं । तेन नाभावादावतिव्याप्तिः ॥

न्या. बो.—सामान्यं निरूपयति—**नित्यमेकमिति** । नित्यत्वे सत्यनेकसमवेतत्वं सामान्यलक्षणमित्यर्थः । नित्यत्वविशेषणानुपादाने संयोगादावतिव्याप्तिस्तत्राप्यनेकद्रव्यसमवेतत्वस्य सत्त्वात् तद्वारणाय नित्यत्वोपादानम् । अनेकसमवेतत्वानुपादान आकाशादावतिव्याप्तिस्तद्वारणायानेकसमवेतत्वविशेषणम् । अनेकत्वानुपादान आकाशगतैकत्वपरिमाणादौ जलपरमाणुरूपादौ चातिव्याप्तिर्जलादिपरमाणुगतरूपादेराकाशगतैकत्वपरिमाणादेर्नित्यत्वात्समवेतत्वाच्च । अतोऽनेक इति समवेतविशेषणम्[2] ॥

[७८]

नित्यद्रव्यवृत्तयो व्यावर्तका विशेषाः[3] ॥

त. दी.—विशेषं लक्षयति—**नित्येति** ॥

न्या. बो.—**नित्यद्रव्यवृत्तय** इति । नित्यद्रव्येषु परमाण्वादिषु वर्तमानाः । अत एव व्यावर्तका इतरभेदानुमितिहेतवः । नित्यद्रव्यवृत्तित्वरूपपक्षधर्मताप्रयोज्येतरभेदानुमापकशालिन इत्यर्थः[4] ॥

[७९]

नित्यसंबन्धः समवायः । अयुतसिद्धवृत्तिः । ययोर्द्वयोर्मध्य एकमविनश्यदपराश्रितमेवावतिष्ठते तावयुतसिद्धौ[5] । **यथावयवावयविनौ गुणगुणिनौ क्रियाक्रियावन्तौ जातिव्यक्ती विशेषनित्यद्रव्ये चेति**[6] ॥

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1 N places this sentence after the next, omitting आदि. Other copies except A J Y omit the sentence altogether. Y omits the next sentence. Q and F insert घटात्यन्ताभावो घटाद्यनुगतोप्यसमवेतः before तेन नाभावा°.

2 The passage is variously read by K R V S U and W. Mss. C and V end here.

3 E G H K add अनंता एव after विशेषाः; X adds पृथिव्यादिचतुष्टयस्य परमाणवः आकाशादिपञ्चकं नित्यद्रव्याणि ।

4 This is a portion of a long abstruse passage in W not found in other Mss.

5 A B E J omit अविनश्यत् which is however necessary.

6 E G J only insert यथा, but their reading has been adopted as making the sentence more grammatical.

त. दी.—समवायं लक्षयति—**नित्येति** । संयोगेऽतिव्याप्तिवारणाय **नित्येति** । आकाशादावतिव्याप्तिवारणाय **संबन्ध** इति । अयुतसिद्धलक्षणमाह—**ययो**रिति । नीलो घट इति विशिष्टप्रतीतिर्विशेषणविशेष्यसंबन्धविषया विशिष्टप्रत्ययत्वाद्दण्डीति प्रत्ययवदिति समवायसिद्धिः । **अवयवावयविना**विति । द्रव्यसमवायिकारणमवयवः । तज्जन्यद्रव्यमवयवि ॥

न्या. बो.—समवायं निरूपयति—**नित्येति** । संबन्धत्वं विशिष्टप्रतीतिनियामकत्वम् । तावन्मात्रोक्तौ संयोगेऽतिव्याप्तिरतो नित्येति विशेषणम् ॥ **ययोर्मध्य** इति । यन्निष्ठकालनिरोपिताधेयतासामान्यं यदवच्छिन्नं तदुभयान्यतरत्वमयुतसिद्धत्वमित्यर्थः ॥

[८०]

अनादिः सान्तः प्रागभावः । उत्पत्तेः पूर्वं कार्यस्य । सादिरनन्तः प्रध्वंसः । उत्पत्त्यनन्तरं कार्यस्य । त्रैकालिकसंसर्गावच्छिन्नप्रतियोगिताकोऽत्यन्ताभावः । यथा भूतले घटो नास्तीति । तादात्म्यसंबन्धावच्छिन्नप्रतियोगिताकोन्योन्याभावः । यथा घटः पटो न भवतीति[2] ॥

त. दी.—प्रागभावं लक्षयति—**अनादि**रिति । आकाशावदतिव्याप्तिवारणाय **सान्त** इति । घटादावतिव्याप्तिवारणाय—**अनादि**रिति । प्रतियोगिसमवायिकारणवृत्तिः प्रतियोगिजनको भविष्यतीति व्यवहारहेतुः प्रागभावः ॥ प्रध्वंसं लक्षयति—**सादि**रिति । घटादावतिव्याप्तिवारणाय—**अनन्त** इति । आकाशादावतिव्याप्तिवारणाय—**सादि**रिति॥ प्रतियोगिजन्यः प्रतियोगिसमवायिकारणवृत्तिर्ध्वस्तव्यवहारहेतुर्ध्वंसः ॥ अत्यन्ताभावं लक्षयति—**त्रैकालिके**ति ॥ अन्योन्याभावेऽतिव्याप्तिवारणाय **संसर्गावच्छिन्ने**ति । ध्वंसप्रागभावयोरतिव्याप्तिवारणाय **त्रैकालिके**ति ॥ अन्योन्याभावं लक्षयति—**तादात्म्ये**ति । प्रतियोगितावच्छेदकारोप्य-

1 S T and W omit this sentence, and K. R. omit the next.

2 Q and U omit **भवति**.

संसर्गभेदादेकप्रतियोगिकयोरप्यत्यन्ताभावान्योन्याभावयोर्बहुत्वम्[1]। केवलदेवदत्ताभावो दण्डयभाव इति प्रतीत्या विशिष्टाभावः[2]। एकसत्त्वे द्वौ न स्त इति प्रतीत्या द्वित्वावच्छिन्नोऽभावः। संयोगसंबन्धेन घटवति समवायसंबन्धेन घटाभावः। तत्तद्घटाभावाद्घटत्वावच्छिन्नप्रतियोगिकसामान्याभावश्चातिरिक्तः॥ एवमन्योन्याभावोऽपि। घटत्वावच्छिन्नः पटो नास्तीति व्यधिकरणधर्मावच्छिन्नप्रतियोगिताकाभावो[3] नाङ्गीक्रियते। पटे घटत्वं नास्तीति तस्यार्थः। अतिरिक्तत्वे स केवलान्वयी।

सामयिकाभावोऽत्यन्ताभाव एव समयविशेषे प्रतीयमानः। घटाभाववति घटानयनेऽत्यन्ताभावस्यान्यत्र गमनाभावेऽप्यप्रतीतेर्घटापसरणे सति प्रतीतेः। भूतले घटसंयोगप्रागभावप्रध्वंसयोरत्यन्ताभावप्रतीतिनियामकत्वं कल्प्यते। घटवति तत्संयोगप्रागभावप्रध्वंसयोरसत्त्वादत्यन्ताभावस्याप्रतीतिः। घटापसरणे च संयोगध्वंससत्त्वात्प्रतीतिरिति। केवलाधिकरणादेव नास्तीति व्यवहारोपपत्तावभावो न पदार्थान्तरमिति गुरवः। तन्न। अभावानङ्गीकारे कैवल्यस्य निर्वक्तुमशक्यत्वात्। अभावाभावो भाव एव नातिरिक्तः, अनवस्थाप्रसङ्गात्। ध्वंसप्रागभावः प्रागभावध्वंसश्च प्रतियोग्येव[4]। अभावाभावोतिरिक्त एव, तृतीयाभावस्य प्रथमाभावरूपत्वान्नानवस्थेति नवीनाः॥

न्या.बो.—प्रागभावं निरूपयति—**अनादिरिति**। ध्वंसं निरूपयति

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1 A's reading is corrupt and makes no sense. The reading of J has been adopted as the most intelligible; although even with it the passage is vague. N F Y Q and Z agree with J but omit अपि; W has भिन्नत्वं for बहुत्वं.

2 The passage seems to have been tampered with. The reading of A J is retained in the text, as being most probably the original. After दण्डयभावः P adds केवलदेवदत्तसद्भावेऽपि दण्डाभावे दण्डयभावः; all other copies read देवदत्ताभावात्, and some of them omit the following words upto प्रतीत्या.

3 C L M N Y Z omit the word प्रतियोगिताक, which however makes no difference of sense as both expressions are common.

4 N F and Q add इति प्राञ्चः after एव, but the words seem to be interpolated.

सादिरिति। अत्यन्ताभावं निरूपयति—**त्रैकालिकेति** ॥ अन्योन्याभावं निरूपयति—**तादात्म्येति**[1] ॥

[८१]

सर्वेषां पदार्थानां यथायथमुक्तेष्वन्तर्भावात्सप्तैव पदार्था इति सिद्धम् ॥

त. दी.—ननु प्रमाण-प्रमेय-संशय-प्रयोजन-दृष्टान्त-सिद्धान्तावयव-तर्क-निर्णय-वाद-जल्प-वितण्डा-हेत्वाभास-च्छल-जाति-निग्रहस्थानानां तत्त्वज्ञानान्निःश्रेयसाधिगम इति न्यायशास्त्रे षोडशपदार्थानामुक्तत्वात्कथं सप्तैवेत्यत आह—**सर्वेषामिति** । सर्वेषां सप्तस्वेवान्तर्भाव इत्यर्थः । 'आत्मशरीरेन्द्रियार्थमनोबुद्धिप्रवृत्तिदोषप्रेत्यभावफलदुःखापवर्गास्तु प्रमेयमि'ति द्वादशविधं प्रमेयम् । प्रवृत्तिर्धर्माधर्मौ । रागद्वेषमोहा दोषाः । राग इच्छा । द्वेषो मन्युः । मोहः शरीरादावात्मभ्रमः । प्रेत्यभावो मरणम् । फलं भोगः । अपवर्गो मोक्षः । स च स्वसमानाधिकरणदुःखप्रागभावासमानकालीनदुःखध्वंसः । प्रयोजनं सुखं दुःखहानिश्च[3] । दृष्टान्तो महानसादिः । प्रामाणिकत्वेनाभ्युपगतोऽर्थः सिद्धान्तः । निर्णयो निश्चयः । स च प्रमाणफलम् । तत्त्वबुभुत्सोः कथा वादः । उभयसाधनवती विजिगीषुकथा जल्पः । स्वपक्षस्थापनहीना वितण्डा । कथा नाम नानावक्तृकः पूर्वोत्तरपक्षप्रतिपादकवाक्यसंदर्भः । अभिप्रायान्तरेण प्रयुक्तस्यार्थान्तरं प्रकल्प्य दूषणं छलम् । असदुत्तरं जातिः । साधर्म्यवैधर्म्योत्कर्षापकर्षवर्ण्यावर्ण्यविकल्पसाध्यप्राप्त्यप्राप्तिप्रसङ्गप्रतिदृष्टान्तानुत्पत्तिसंशयप्रकरणहेत्वर्थापत्त्यविशेषोपपत्त्युपलब्ध्यनुपलब्धिनित्यानित्यकार्याकार्यसमा जातयः । वादिनोऽपजयहेतुर्निग्रहस्थानम् । प्रतिज्ञाहानिः प्रतिज्ञान्तरं, प्रतिज्ञाविरोधः, प्रतिज्ञासंन्यासो, हेत्वन्तरम्, अर्था-

1 S T U and W omit this, except त्रैकालिकेति and instead of it give a long passage which is not found in other copies.

2 J K Q and W insert अपि, and E एव, after सर्वेषां; they also insert एव after उक्तेषु.

3 This is the reading of C G J L P Y Z. A has सुखं दुःखं हानिश्च which makes no sense. N reads प्राप्तिः after सुखं.

न्तरं, निरर्थकं, अविज्ञातार्थकं, अपार्थकं, अप्राप्तकालं, न्यूनं, आधिकं, पुनरुक्तं, अननुभाषणं, अज्ञानं, अप्रतिभाविक्षेपः, मतानुज्ञा, पर्यनुयोज्योपेक्षणं, निरनुयोज्यानुयोगः, अपसिद्धान्तः, हेत्वाभासश्च, निग्रहस्थानानि । शेषं सुगमम् ॥

ननु करतलानलसंयोगे सत्यपि प्रतिबन्धके सति दाहानुत्पत्तेः शक्तिः पदार्थान्तरमिति चेन्न । प्रतिबन्धकाभावस्य कार्यमात्रे कारणत्वेन शक्तेरनुपयोगात् कारणस्यैव शक्तिपदार्थत्वात् । ननु भस्मादिना कांस्यादौ शुद्धिदर्शनादाधेयशक्तिरङ्गीकार्येति चेन्न[1] । भस्मादिसंयोगसमानकालीनास्पृश्यस्पर्शप्रतियोगिकयावदभावसहितभस्मादिसंयोगध्वंसस्य शुद्धिपदार्थत्वात् ॥

स्वत्वमपि न पदार्थान्तरम् । यथेष्टविनियोगयोग्यत्वस्य स्वत्वरूपत्वात् । तदवच्छेदकं च प्रतिग्रहादिलब्धत्वमेवेति ॥

अथ विधिर्निरूप्यते । प्रयत्न[2]जनकचिकीर्षाजनकज्ञानविषयो विधिः। तत्प्रतिपादको लिङादिर्वा । कृत्यसाध्ये प्रवृत्त्यदर्शनात्[3] कृतिसाध्यताज्ञानं प्रवर्तकम् । न च विषभक्षणादौ प्रवृत्तिप्रसङ्गः । इष्टसाधनतालिङ्गककृतिसाध्यताज्ञानस्य काम्यस्थले नित्यनैमित्तिकस्थले च विहितकालजीवित्वनिमित्तकज्ञानजन्यस्यैव[4] प्रवर्तकत्वात् । न चाननुगमः स्वविशेषणवत्ताप्रतिसंधानजन्यत्वस्यानुगतत्वादिति गुरवः । तन्न । लाघवेन कृतिसाध्येष्टसाधनताज्ञानस्यैव चिकीर्षाद्वारा प्रयत्नजनकत्वात् । न च नित्ये इष्टसाधनत्वाभावादप्रवृत्तिप्रसङ्गस्तत्रापि प्रत्यवायपरिहारस्य पापक्षयस्य च फलत्वकल्पनात् । तस्मात्कृतिसाध्येष्टसाधनत्वमेव लिङर्थः। ननु "ज्योतिष्टोमेन स्वर्गकामो यजेत" इत्यत्र लिङा स्वर्गसाधनकार्यं

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1 G reads शुद्धिदर्शनात् शुद्धिः पदार्थान्तरमितिचेन्न.

2 A P read प्रत्यवाय for प्रयत्न which is wrong; M has प्रतिवृत्ति which is probably a mistake for प्रवृत्ति.

3 N and Q adds कृतिसाध्येप्रवृत्तिदर्शनात् after प्रवृत्त्यदर्शनात्, but it is superfluous. A P wrongly separate ज्ञान from °साध्यता and join it to प्रवर्तकम्, which makes no sense.

4 O L M N Q Y Z put this before नित्यनैमित्तिक°, A and Q have ज्ञानजन्यत्वस्य; J is doubtful.

प्रतीयते । यागस्याशुविनाशिनः कालान्तरभाविस्वर्गसाधनत्वायोगात्त-द्योग्यं स्थायिकार्यमपूर्वमेव लिङाद्यर्थः ॥ कार्यं कृतिसाध्यं । कृतेः सविषयत्वात् । विषयाकाङ्क्षायां यागो विषयत्वेनान्वेति । कस्य कार्यमिति² नियोज्याकाङ्क्षायां स्वर्गकामपदं नियोज्यपरतयान्वेति । कार्यबोद्धा नियोज्यः । तेन 'ज्योतिष्टोमनामकयागविषयकं स्वर्गकामस्य कार्य'मिति वाक्यार्थः संपद्यते । वैदिकलिङ्त्वात्³ "यावज्जीवमग्निहोत्रं जुहुयात्" इति नित्यवाक्येऽप्यपूर्वमेव वाच्यं कल्प्यते । "आरोग्यकामो भैषजपानं कुर्यात्" इत्यादौ लौकिकलिङः क्रियाकार्ये लक्षणेति चेन्न । यागस्याप्ययोग्यतानिश्चयाभावेन साधनतया प्रतीत्यनन्तरं तन्निर्वाहार्थमवान्तरव्यापारतया अपूर्वकल्पनात् । कीर्तनादिनाऽनाशश्रुतेर्न⁴ यागध्वंसो व्यापारः । लोकव्युत्पत्तिबलात्क्रियायामेव कृतिसाध्येष्टसाधनत्वं लिङा बोध्यत इति लिङ्त्वेन रूपेण विध्यर्थत्वम् । आख्यातत्वेन प्रयत्नार्थकत्वम् । पचति पाकं करोतीति विवरणदर्शनात् किं करोतीति प्रश्ने पचतीत्युत्तराच्चाख्यातस्य प्रयत्नार्थकत्वनिश्चयात् । रथो गच्छतीत्यादावनुकूलव्यापारे लक्षणा "देवदत्तः पचति तण्डुलान्देवदत्तेन पच्यते तण्डुलः" इत्यत्र कर्तृकर्मणोर्नाख्यातार्थत्वम् किंतु तद्गतैकत्वादीनामेव । तयोराक्षेपादेव लाभः । प्रजयतीत्यादौ धातोरेव प्रकर्षे शक्तिः । उपसर्गाणां द्योतकत्वमेव । न तत्र शक्तिरस्ति ॥

पदार्थज्ञानस्य परमं प्रयोजनं मोक्षः । तथाहि । "आत्मावाऽरे द्रष्टव्यः श्रोतव्यो मन्तव्यो निदिध्यासितव्यः" इति श्रुत्या श्रवणादीनामात्मसाक्षात्कारहेतुत्वबोधनात् । श्रुत्या देहादिविलक्षणात्मज्ञाने सत्यप्यसंभावनाऽनिवृत्तेर्युक्त्यनुसन्धानरूपमननसाध्यत्वात् मननोपयोगिपदार्थ-

1 A J Z omit आदि.

2 A reads wrongly अन्वितस्यकार्यमिति for अन्वेति कस्य कार्यमिति.

3 This is the reading of J N. A P have वैदिकालिङ्त्वात्, L वैदिकालिङत्वात्, M वैदिकालिङ्त्वात्, Z वैदिकालिङ्त्वात्, all of which appear to be wrong.

4 This is the reading of Q; J N Y and Z read नाऽनाश", while A reads कीर्तनादिना न श्रुतेस्तेन, both of which make no sense; L M P are also corrupt.

निरूपणद्वारा शास्त्रस्यापि मोक्षोपयोगः । तदनन्तरं श्रुत्युपदिष्टयोगविधिना निदिध्यासने कृते तदनन्तरं देहादिविलक्षणात्मसाक्षात्कारे सति देहादावहमभिमानरूपमिथ्याज्ञाननाशे सति दोषाभावात्प्रवृत्त्यभावे धर्माधर्मयोरभावाज्जन्माभावे पूर्वधर्माधर्मयोरनुभवेन नाशे चरमदुःखध्वंसलक्षणो मोक्षो जायते । ज्ञानमेव मोक्षसाधनं मिथ्याज्ञाननिवृत्तेर्ज्ञानमात्रसाध्यत्वात् "तमेव विदित्वातिमृत्युमेति नान्यः पन्था विद्यतेऽयनाय" इति साधनान्तरनिषेधाच्च । ननु "तत्प्राप्तिहेतुर्विज्ञानं कर्म चोक्तं महामुने" इति कर्मणोऽपि मोक्षसाधनत्वस्मरणाज्ज्ञानकर्मणोः समुच्चय इति चेन्न । "नित्यनैमित्तिकैरेव कुर्वाणो दुरितक्षयम् । ज्ञानं च विमलीकुर्वन्नभ्यासेन च पाचयेत् । अभ्यासात्पक्वविज्ञानं कैवल्यं लभते नरः" इत्यादिना कर्मणो ज्ञानसाधनत्वप्रतिपादनात् । ज्ञानद्वारैव कर्म मोक्षसाधनं न साक्षात् । तस्मात्पदार्थज्ञानस्य मोक्षः परमं प्रयोजनमिति सर्वं रमणीयम् ॥

इति श्रीमदद्वैतविद्याचार्य-श्रीमद्राघवसोमयाजिकुलावतंस-श्रीमत्तिरुमलाचार्यवर्यस्य सूनुनाऽन्नंभट्टेन कृता स्वकृततर्कसंग्रहस्य दीपिका संपूर्णा ॥

न्या. बो.—सर्वेषामिति । प्रमाणप्रमेयसंशयप्रयोजनदृष्टान्तसिद्धान्तावयवतर्कनिर्णयवादजल्पवितण्डाहेत्वाभासछलजातिनिग्रहस्थानानां तत्त्वज्ञानान्निःश्रेयसाधिगम इति न्यायस्यादिमे सूत्र उक्तानां प्रमाणप्रमेयादीनामित्यर्थः । विस्तरस्त्वन्यत्रानुसंधेयः ॥

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1 After साक्षात् G V add तदुक्तमाचार्यैस्तस्मादुपकारकं कर्मेति.

2 This colophon is found in J alone, and is inserted here because it is important. It also occurs in two other works of our author.

3 This is the reading of R and U. B omits प्रमाणप्रमेया—र्थः, and join उक्तानां to next sentence. S and W read the passage differently. Different Mss. give various colophons, while S and W add a verse, which are omited here.

काणादन्यायमतयोर्बालव्युत्पत्तिसिद्धये ।
अन्नंभट्टेन विदुषा रचितस्तर्कसंग्रहः ॥

इति श्रीमहामहोपाध्याया**यान्नंभट्ट**विरचितः स्वकृतदीपिकया श्रीगोवर्धनकृतन्यायबोधिन्या च समेतस्तर्कसंग्रहः समाप्तः ॥

NOTES.

Sect. I.

मङ्गलम्.

Opening prayer.

"*Having enshrined the Lord of the universe in my heart, and having made a salutation to the preceptor, I compose this Compendium of all knowable things for the easy comprehension of beginners.*"

1. Following the usual orthodox practice, the author begins his work with a prayer to the deity and a salutation to the preceptor. This मङ्गल, say the commentators, is necessary for the completion of a work, and for two reasons; first because it is enjoined by the *S'ruti*, and secondly because its necessity is proved by inference. Of course there is no express Vedic text, enjoining the मङ्गल, but the existence of such a text can be assumed on the authority of good usage (शिष्टाचार), by the well-known rule laid down by *Jaimini* असति ह्यनुमानम्* 'a *S'ruti* text is to be inferred when an express one is not to be found.' The argument for inferring a *S'ruti* text on the authority of शिष्टाचार is thus stated by T. D.—A मङ्गल is an act enjoined by the Vedas, because it has always been the object (विषय) of uncommon (अलौकिक) and unprohibited (अविगीत) practice of wise men, like दर्श and other rites. It is obvious that this inference is only available for the assumption of a text, when the शिष्टाचार happens to be अलौकिक (uncommon or sacred) and अविगीत (unprohibited). An अलौकिकशिष्टाचार is that which is not रागाद्यप्राप्त, *i. e.* caused by our own inclinations, such as the ordinary human acts of eating and drinking, but which is practised as a duty rather than as a pleasure; while it is अविगीत when it is not expressly prohibited by *S'ruti* like the performance of a *S'râddha* ceremony at night.

* Jaim. S. I. 33

2. The Vedic origin of a मङ्गल having been thus established, the additional inference which proves its necessity for the completion of a book is rather of secondary importance. It is to be admitted however as a श्रुत्युपोद्बलक तर्क, an argument supporting the *S'ruti*. This inference is based on our experience that a book is finished when it is commenced with a मङ्गल, and not otherwise. This experience however, says an objector, is not invariable. We have instances of works which are left unfinished in spite of ample मङ्गल in the beginning, and also of books that were completed without the superfluous aid of a मङ्गल. The reply given to this objection is hardly convincing. It is founded on the maxim स्थितस्य गतिः समर्थनीया, and can only be justified on the supposition that the necessity of मङ्गल has been already incontrovertibly proved by the अनुमितश्रुति, and that the secondary inference is to be accepted only so far as it supports that *S'ruti*. The author says that in those cases where the books were left unfinished in spite of the मङ्गल, the obstacles must be supposed to have been too numerous to be overcome by the amount of मङ्गल actually made, while, in the contrary instances of works completed without the मङ्गल, we might presume that the author had offered the required prayer, either in his previous birth or silently in his mind, although he did not insert it in his book.

The four Anubandhas.

3. The second line of the stanza indicates, as is usually done, what are called the four *Anubandhas*, or necessary *elements* of a literary work. These are:—1 विषय (subject matter) 2 प्रयोजन (purpose) 3 संगति (connection) and 4 अधिकारी (*person for whom the book is written*). The अधिकारी in this case is a बाल, *i. e.* not an infant (स्तनंधय), but one who is ग्रहणधारणपटु able to understand and retain the lessons given by his tutor. Two things are necessary for the acquisition of knowledge, a supple understanding (ग्रहणशक्ति), and a retentive memory (धारणाशक्ति); and only he who possesses these two qualities is fit to learn this *S'âstra*. S. C. would have the बाल to be one who is अधीतव्याकरणकाव्यकोशोऽनधीतन्याय-

शास्त्रः *i. e.* one who has mastered grammar, poetry and vocabulary, but does not know Logic. सुखबोधाय explains the purpose (प्रयोजन) why a new work like this is undertaken, when there were already many ably written treatises on the subject. The name तर्कसंग्रह at once explains the subject matter (विषय), namely तर्क, as well as its connection with the method of treatment adopted in the book (संगति). तर्क is *defined* as तर्क्यन्ते प्रतिपाद्यन्त इति तर्काः, द्रव्यादिसप्तपदार्थाः. The word तर्क is employed in *Nyâya* writings in several different senses, but the one intended here is quite unusual. It is rarely met with anywhere except in the titles of a few manuals similar to the present work, such as तर्ककौमुदी, तर्कभाषा, तर्कवल्ली and तर्कामृत. संग्रह primarily means a collection but here it signifies a compendium or brief exposition. T. D. and T. C. define it simply संक्षेपेण स्वरूपकथनम्. V. V. and S. C. give a more elaborate definition, making a संग्रह comprise three parts, namely, उद्देश (simple enumeration), लक्षण (definition) and परीक्षा (examination or exposition). The present book contains all these three. पदार्थोद्देश from Sec. 2 to Sec. 9 and their लक्षण and परीक्षा together from Sec. 10 to the end.

4. Either the passage मङ्गले कृतेऽपि etc. is corrupt or the author has committed a strange solecism.

A disputed reading. I have retained the reading of A, because, while it is found in most of the copies, it is not much worse than the others given by F, Q or N. If *Kiraṇâvali* and *Kâdambarî* are the well-known works of that name, they are quite inappropriate as *opposite* instances of the efficacy of मङ्गल. *Kiraṇâvali*, if it be the commentary on *Pras'astapâda's* scholium on the aphorisms of *Kaṇâda*, by the famous logician *Udayanâchârya*, is supposed to be an unfinished work, said to extend only as far as the section on बुद्धि; but the eight Mss. collected by Pandit Vindhyeshwari Prasâd Dube for his edition in Benaras Sanskrit Series contain only the chapters on द्रव्य and गुण. It however begins with a मङ्गल to the Sun and Creator, and may therefore be a fit instance of non-completion in the spite of मङ्गल. But *Kâdambarî* too, if it is the same as the well-known work of *Bâṇabhaṭṭa*, remained unfinished, although it opens with no less than 20 verses of मङ्गल. *Kâdambarî* therefore cannot

serve as a counter instance of a work completed without a मङ्गल, unless of course we resort to the two-fold supposition, that its completion by the author's son is to be considered as समाप्ति proper, and that the opening मङ्गल does not form part of the book. The latter supposition is apparently supported by T. D's subsequent words कादम्बर्यादौ ग्रन्थाद्बहिरेव मङ्गलं कृतं, which are interpreted by some to mean that the मङ्गल verses are outside the book. But the interpretation is not approved by *Nîlakantha* who takes the word बहिः to mean जन्मान्तरादौ. Either therefore the author committed a mistake or he meant some other *Kâdambarî* which is not known at present. The difficulty is no doubt removed in M which reads बौद्धग्रन्थादौ for कादम्बर्यादौ, but the reading is not supported by any other copy and is probably an emendation of some one who perceived the mistake. The commentator T. C. also omits *Kâdambarî*, and mentions in its stead a प्रमत्तानुष्ठितग्रन्थ. The other readings given in F, Q and N, and apparently supported by *Nîlakantha* and S. C. are equally faulty, since although the solecism as regards *Kâdambarî* is removed, a similar one is committed about *Kiranâvali* which is neither completed nor is devoid of मङ्गल. T. C. and S. C. avoid the difficulty about *Kiranâvali* by substituting नास्तिकग्रन्थादौ for it. Of course there is the possibility that *Kiranâvali* may have been finished by its author and a portion of it is now lost; but the supposition is improbable, and does not lessen a whit the difficulty as regards the actual presence of मङ्गल. Some have supposed that the *Kiranâvali* mentioned here is a नास्तिकग्रन्थ, and not the commentary of *Udayana*, but no such work is known. In short whatever reading we accept, the difficulty created by the mention of *Kiranâvali* and *Kâdambarî* as opposite instances is insuperable, since both of them, being incomplete in spite of a long or short मङ्गल, are works exactly of the same nature.

SECT. II. पदार्थाः

The seven categories.

"*There are seven Categories:—Substance, Quality, Action, Generality, Particularity, Co-inherence or Intimate relation and Negation.*"

1. The *Dîpikâ* following the etymological sense of the word (पदस्य अर्थः) defines a पदार्थ as 'a thing having a name' (अभिधेयत्वं पदार्थसामान्यलक्षणम्). अर्थ is a thing to which the senses travel (ऋच्छन्तीन्द्रियाणि य सः) *i. e.* any external object which is comprehended by the senses. पदार्थ therefore, means any object that is nameable. Other definitions of पदार्थ convey the same sense. S. C. defines पदार्थत्वम् as ज्ञेयत्वम्, while T. C. and S. P. as प्रमितिविषयत्वम्, *i. e.* any thing which is an object of knowledge. A thing however which is knowable must also have a name; and so knowability (ज्ञेयत्व) and nameability (अभिधेयत्व) regarded as definitions of पदार्थ are interchangeable. The word is invariably used by the *Vais'eshikas* in this composite sense.

Aristotle's categories.

2. The rendering of the word पदार्थ by 'category,' though not quite accurate, is convenient and useful for all practical purposes. Ballantyne used the word 'category,' while Colebrook translated पदार्थ by 'predicament'; but both renderings are inaccurate, in as much as they imply something which can be predicated of another, while पदार्थ implies not only a thing which is predicable of another, but also a thing which is capable of having something predicated of it. Categories, especially in the Aristotelian sense, are a classification of predicates only, and not an enumeration of all nameable things (including both subjects and predicates) as the *Padârthas* of the *Vais'eshikas* are. In this respect, the classification of the *Vais'eshikas* is superior to that of Aristotle. The latter enumerated ten categories, 1 Substance, 2 Quantity, 3 Quality, 4 Relation, 5 Place, 6 Time, 7 Posture, 8 Appertenance or Property, 9 Activity and 10 Passivity. Of these the last nine only can be properly said to be predicable of something else *i. e.* substance, but sub-

stance itself, being assumed to be an *Ens* (Being) independent of all attributes, cannot be predicated of anything. It cannot be predicated even of itself, because in that case it will be an attribute and not substance. Thus in including substance among the categories Aristotle confounded the notion of a predicable with that of a nameable thing; but *Kaṇâda* is not open to the charge in as much as his *Dravya* is a nameable thing, and therefore a *Padârtha*. Notwithstanding this distinction, however, the word category has been employed in so many senses by subsequent European philosophers that one is almost justified in using it as an equivalent of पदार्थ also. In the history of philosophy, the categories have been successively a classification of universal things, or of words, or of forms of thought; and consequently they have now come to mean simply the highest classes to which all the objects of knowledge can be reduced and in which they can be arranged in subordination and system. In this general sense, *Kaṇâda's Padârthas* are as much categories as those of Aristotle or of Kant or of Mill; only that their number and arrangement would vary according to the fundamental principle on which the classification is based, and the purpose for which it is intended. The classification of Aristotle is mainly logical, that of *Kaṇâda* metaphysical. One concerns with notions and propositions, the other with *external* objects which give rise to those notions. The seven *Padârthas* of the *Vais'eshikas* can therefore be easily apportioned among the categories of Aristotle. *Dravya* and *Guṇa* correspond to Substance and Quality, respectively. Aristotle's Quantity is classed among the *Guṇas* by *Kaṇâda*. Relation is of two kinds: *Saṁyoga* and *Samavâya*, the first of which is a *Guṇa* and the second a distinct *Padârtha*. The remaining categories really fall under relation in its widest sense, but some of them are separately recognized by the *Vais'eshikas*. Thus Time and Place are *Dravyas*. Activity is *Karma* while Passivity is simply negation of it. Property may be *Sâmânya*, *Vis'esha*, or any common attribute called by later *Naiyâyikas* an *Upâdhi*. Lastly Posture is संस्थानविशेष and is at best a *Guṇa*. Aristotle does not mention *Abhâva* or negation as he deals only with *Ens* or Being.

3. The various classifications of *Padârthas*, given by Indian systematists can be likewise reduced to the seven *Padârthas* and *vice versa*, if one clearly understands beforehand the particular standpoint of each. *Nyâya* writings do not explain the process by which the seven-fold division of *Padârthas* was first obtained, but if we may make a guess, the process must have been something like this. A notion is either positive or negative, and so the external object of a notion might be भाव or अभाव. भाव things again are of two kinds, properties and a *common* substratum in which they reside. The latter is द्रव्य. Of the properties again, some reside in many objects conjointly, others in individual things singly. The first is सामान्य, while the latter class is again divisible into properties that are stationary and those that are evanescent *i. e.* गुण and कर्म. The remaining two *Padârthas* समवाय and विशेष are assumed to explain the special theories of *Vais'eshikas*. Other Indian philosophical schools also have their own classification of things, suited to their particular doctrine or theory. Every system of science or philosophy in ancient times thought it necessary to begin by arranging the Universe into a few elementary classes. Thus *Gotama* enumerates sixteen *Padârthas*, necessary for the functions of logic, the *Vedântins* have two, *Chit* and *Achit*; the *Râmânujas*, one more, *Îs'vara*; the *Sâṅkhyas*, twenty-five; the *Mîmâṁsakas* eight; and so on. All schools do not use the word पदार्थ exactly in the same sense. It is used even more loosely than the word *category* in Europe, and often-times implies nothing more than topics to be treated in a book.

Classifications of Padârthas.

4. The *Tarka-Dîpikâ* says that the word सप्त is used to exclude a larger number. T. D. and other commentaries here give a curious disquisition as to whether an eighth *Padârtha* can be logically proved. An eighth *Padârtha* is either known or unknown. If it is known, it exists and the restriction to seven is wrong; if however it is unknown it cannot be negatived, because there can be no negation of an unknown quantity. This dilemma is cleared by defining

Why seven.

पदार्थत्व to be द्रव्यादिसप्तान्यतमत्वव्याप्यम्. *i. e.* the genus पदार्थ *is covered* by any one of the seven species, *Dravya etc.* The passage, however, beginning with ननु is of doubtful authenticity, as it is questioned by *Nîlakantha*, who remarks, "एवं च बहुषु पुस्तकेषु सप्तान्यतमत्वाप्रसिद्धिशङ्कातत्समाधानपरस्य 'ननु सप्तान्यतमत्वमि'त्यादिग्रन्थस्यासत्त्वेऽपि न क्षतिरिति ध्येयम्."

A guess.

5. It is probable that the word 'seven' is used merely to emphasize the seven-fold enumeration of the modern *Vais'eshikas* as distinguished from the six *Padârthas* of *Kanâda* and the sixteen of *Gotama*. The original aphorisms of *Kanâda* mention only six categories, and the seventh, अभाव, is added by commentators on the ground that the six up to समवाय being all भाव things, *i. e. entities*, necessarily imply their contradictory the *non-entity*. Consequently many first divide things into भाव and अभाव, the former being then subdivided into six. The sixteen categories of *Gotama* and several others assumed by other *Naiyâyikas*, are reconciled with the sevenfold enumeration by T. D. in its concluding passage.*

SECT. III. द्रव्याणि.

Substances.

" *Of these seven categories* (तत्र = सप्तपदार्थमध्ये *S. C.*) *the class Dravya comprises nine, and nine only:—Earth, Water, Light, Air, Ether, Time, Space, Soul and Mind.*

1. Out of the seven categories enumerated in the preceding section, the author now mentions the nine subdivisions of the first, *Substance*. T. D., T. K., T. C. and S. C. give two definitions of द्रव्य, *viz.* द्रव्यत्वजातिमत्त्वम् and गुणवत्त्वम् to which may be added क्रियावत्त्वम् and समवायिकारणत्वम् ; but all these, except perhaps the last, are defective. The first appears like a purely verbal definition, or a truism which teaches us nothing new about the thing defined. S. C. however tries to justify it by arguing that द्रव्यत्वजाति is independently proved, either by direct perception or by inference. The inference is put thus, द्रव्यवृत्तिर्या समवायिकारणता सा किंचि-

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* P. 64 *supra.*

द्धर्मावच्छिन्ना, कारणतात्वाद्दण्डवृत्तिकारणतावत्, *i. e.* the intimate causality residing in a *Dravya* is distinguished by some attribute (which is the genus *Dravya* or substantiality) because every causality such as that of a stick has a distinguishing attribute. The argument of course makes two assumptions which are not yet proved, viz. that only a *Dravya* can be an intimate cause, and that such a cause must have some attribute to distinguish it. The second definition is superior though still defective. If we say that a substance is anything in which qualities reside, we exclude an important class of substances, namely all created things just at the moment of their production, when according to the theory of the *Naiyâyikas* they are without any attribute. आद्ये क्षणे निर्गुणं द्रव्यं तिष्ठति is an axiom of *Nyâya*, for if the qualities are supposed to rise simultaneously with the substances and not a moment later, all distinction between qualities and substances will virtually disappear. The definition गुणवत् will not therefore apply to *Dravyas* at the first moment of their creation and is therefore अव्याप्त. The defect is remedied by amplifying it thus, गुणसमानाधिकरण-सत्ताभिन्न-जातिमत्त्वं द्रव्यत्वम्. Although products in the first moment are without attributes, they possess even then a जाति (*i. e.* द्रव्यत्व in this case) which co-exists with qualities in the same substratum. But such a definition again would be too wide because सत्ता (existence) is also a जाति that is co-existent with qualities ; hence the word सत्ताभिन्न is inserted in the definition to qualify जाति. This amplification however makes the latter definition almost as verbal as the first द्रव्यत्वजातिमत्त्वम्, only that the word द्रव्यत्व is avoided. Though thus theoretically faulty, the definition is good for all practical purposes. The definition समवायिकारणत्वम् is technically correct, for only a *Dravya* can be the समवायिकारण of a product, but it is पारिभाषिक as being based on a peculiar doctrine of *Vaiśeshikas* and is not therefore easily intelligible to ordinary people.

2. The difficulty of defining a substance accurately arises from its very nature. A definition which is not to be merely verbal must be an exhaustive enumeration of all essential attributes; but a substance *ex hypothese* is something

that, while underlying all attributes, is quite distinct from them. Now if the qualities which are enumerated as the definition of substance are essentially and invariably connected with it, they are part and parcel of substance itself, and not attributes distinct from it; while if they are not so connected they do not constitute a definition. This dilemma has perplexed philosophers of all ages and countries, and consequently many of them, like Berkeley in England and the *Bauddhas* in India, have denied any independent entity such as a *substance* altogether. This is not a satisfactory solution however, as the necessity of having some *substratum* for the qualities still remains. To obviate this, others like the *Vedântins* acknowledge the reality of *substance* but call its manifestation अनिर्वचनीय indefinable or माया.

Why nine.

2. The propriety of नवैव is the same as that of सप्त in the last section, the words being used to limit the number of substances to nine only. T. D. here controverts the position of the *Bhaṭṭa* school of *Mîmâṁsakas* that darkness is a *dravya*. Darkness, says the objector, is a substance because it is blue and moves, and therefore the definition of *Dravya*, गुणक्रियावत् strictly applies to it.

What is darkness.

But darkness cannot be classed under any of the nine *dravyas* above enumerated. As darkness has colour it cannot fall under any of the last five, ether, time, space, soul and mind, which are colourless. It is not air because it has neither touch nor constant motion which are the attributes of air. It is not light, as it has neither bright colour, nor hot touch. It is not water because it has neither cool touch nor white colour, the colour of water. Lastly it is not earth, because it has neither scent nor touch. Darkness therefore, not falling under any of the nine *dravyas*, must be regarded as a tenth one, and so the restriction to nine is wrong. Having thus stated the objector's argument in full, T. D. answers it by declaring that darkness is, according to the *Naiyâyikas*, merely the negation of light. A tenth *dravya* can be either with or without colour; but darkness cannot be the latter as it is blue. Nor can it be a substance having colour, because

every such substance requires light for being perceived with the eyes, while darkness is perceived only when there is no light. Darkness is therefore defined as प्रौढप्रकाशकतेजःसामान्याभावः *i. e.* absence of large and illuminating light in general. The S. C. explains the propriety of each word in the definition thus: The word सामान्य implies that darkness is total absence of any light whatever, and not the absence of a particular light such as that of the sun or the moon or a lamp. The word प्रकाशक is necessary because otherwise there will be no darkness wherever there is gold which is classed by *Naiyâyikas* under *Tejas*. Finally प्रौढ excludes the possibility of darkness being negatived even by minute particles of light. How is then the perception of blue colour and motion in darkness to be accounted for? T. D. declares it to be a mis-apprehension. Besides the above two views with respect to the nature of darkness, *Mâdhavâchârya* the author of *Sarvadars'ana-Sangraha** mentions two more, namely those of *S'rîdhara*, the reputed author of *Nyâya-Kandali* and of a section of *Prabhâkara* school of *Mîmâṁsakas*. The first mentions that darkness is nothing more than the blue colour imposed on something else, thus making darkness a quality only; while the latter call it absence of knowledge of light, and not that of light itself. A fifth doctrine would say that instead of regarding darkness as the absence of light we should deem it a *dravya* and regard light itself as the absence of darkness. But these views are not warranted by experience, and the one propounded above as to darkness being the absence of light is the most satisfactory. The controversy however well illustrates the aptitude of Indian mind for hair-splitting.

3. Incidentally T. D. gives under this section the three characteristic marks of a perfect definition. *A definition.* T. D. defines a लक्षण as दूषणत्रयरहितो धर्मः *i. e.* an attribute free from the three faults. A more Scientific definition of लक्षण, however, is that given by *Vâtsyâyana* उद्दिष्टस्यातत्त्वव्यवच्छेदकधर्मो लक्षणम्, a

* *Sarv. D. S. Calc, ed,* p. 108.

definition is an attribute which differentiates the *definitum* from all things different from itself.* In other words लक्षण is what English logicians call a 'differentia.' Another definition of लक्षण is व्यावर्तकम् which with the qualifications mentioned by T. D. means the same thing as the preceding. A fourth definition and of a somewhat different kind is असाधारणधर्मः, and असाधारणत्वम् is defined as लक्षतावच्छेदकसमनियतत्वम् a characteristic mark which exactly covers all (*i. e.* not more nor less) things denoted by the *definitum*. From this it will be seen that the idea of a definition entertained by Indian logicians was somewhat narrow. It was not an exclusive enumeration of all the essential *characteristics* of a thing, but only a differentia, or "laying down the boundry" (as the word definition etymologically means) which separated the thing defined from everything else. The function of a definition was more negative than positive; that is, a definition was more often intended merely to exclude all things other than the *definitum* than to give us any accurate notion of the *definitum* itself. Accordingly any characteristic that was peculiar to the *definitum* was made to serve the purpose. The consequence was that the definitions of the *Naiyāyikas* often became merely verbal or nominal, which satisfied the ear as it were but conveyed no idea of the thing defined. द्रव्यत्वजातिमत्त्वम् and पृथग्व्यवहारकारणम्, which are given by *Annambhatta* as definitions of द्रव्य and पृथक्त्व respectively, may be mentioned as instances of this kind of inconsequential definitions. Another device employed to escape difficulties was first to give a wide description of the definitum and then to narrow it down by the express exclusion of superfluous objects by using words like इतर or भिन्न as for instance, the definition of इन्द्रिय, शब्देतरोद्भूत etc. For practical purposes however the definitions of *Naiyāyikas* are generally useful and often ingenious; and a student bearing the above limitations in mind will escape the misconceptions and prejudices that are likely to arise owing to the peculiar form of many definitions he will meet with in the course of his study.

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* *Vāt.* on G. S. I, 1, 2.

Its three defects

4. The three faults mentioned in the definition of लक्षण given by T. D. are अव्याप्ति, अतिव्याप्ति and असंभव. अव्याप्ति is लक्ष्यैकदेशावृत्तित्वम् *i. e.* non-pervasion of the characteristic on a portion of (the class denoted by) the *definitum*. For instance, if we define a cow as a tawny animal, we exclude all black, red or white cows. अतिव्याप्ति is extension of the attribute to things not denoted by the *definitum*, as when we define a cow as a horned animal, and thereby include buffaloes that have horns but are not cows. असंभव is the total absence of the characteristic on the *definitum* itself, as when we define a cow to be an animal with uncloven hoofs; Of these असंभव is only a kind of अव्याप्ति *in excelsis.* In short a proper definition ought to be neither too narrow, nor too wide, nor totally false. If for instance we define a cow to be an animal having a dew-lap, we avoid all the three faults, since all cows have dew-laps and none but cows have them. It is not possible always to have such a perfect definition. *Annambhatta* often employs simple enumeration instead of a regular definition; and when even this is not possible he contents himself with an approximate description. For examples of the first see Sects. 2, 3, 4, 5, 6 and 9, while for the latter see Sects. 8, 11, 12, 20, 25–32. Such enumerations or descriptions, besides, are better suited to the untrained understandings of the beginners for whom this treatise is mainly written. The author has wisely relegated all abstruse definitions and discussions to the commentary.

SECT. IV. गुणाः

Qualities.

"There are twenty-four qualities, viz. colour, taste, odour, touch, number, dimension or magnitude, severality, conjunction or contact, disjunction, priority or propinquity, posteriority or remoteness, weight, fluidity, viscidity, sound, intellect or understanding, pleasure, pain, desire, aversion, effort or volition, merit, demerit and faculty."

The T. D. defines a *Guṇa* as गुणत्वजातिमान्, possessing the genus *Guṇa*, or द्रव्यकर्मभिन्नत्वे सति सामान्यवान् "possessing generality and being at the same time different from *substances* and *motions*." The first is only a verbal definition, but the latter needs explanation. According to the theory of the *Naiyâyikas*,[*] जाति or सामान्य resides in three *Padârthas* only, *viz*. *Dravya*, *Guṇa* and *Karma*. The definition सामान्यवत् would therefore cover all the three, and hence it is restricted to *Guṇa* by expressly excluding *Dravya* and *Karma*. The same is expressed in another way as द्रव्यावृत्ति-नित्यवृत्ति-जातिमान् *i. e.* possessing a जाति which permanently inheres in a receptacle other than a *Dravya*. Here the word नित्य excludes कर्मत्वजाति which, like individual motions, is transitory; while the epithet द्रव्यावृत्ति excludes both द्रव्यत्व and सत्ता. The definition of *Guṇa* given in B. P. is fuller, अथ द्रव्याश्रिता ज्ञेया निर्गुणा निष्क्रिया गुणाः[†] *i. e.* *Guṇas* reside in *dravyas* and are themselves devoid of attributes and motions. This slightly varies from the original definition of *Kaṇâda*, which is द्रव्याश्रय्यगुणवान् संयोगविभागेष्वकारणमनपेक्ष इति गुणलक्षणम्[‡] The expression संयोगविभागेष्वकारणम् is added in the *Sûtra* to exclude *Karma* which is the cause of conjunction and disjunction.

Quality defined.

2. Comparing the several definitions of *Guṇa*, we find that it is clearly distinguished from *Dravya* as an attribute dependent on something else *i. e.* *dravya*, which is self-supported, while it is distinguishable from *Karma*, as an attribute which is fixed or permanent, and not evanascent or transitory. Both *Guṇa* and *Karma*, quality and motion, are accidents attaching to *Substance*, the *Ens*, which underlies and supports them; but Guṇa is *permanent*, while Karma is *evanescent*. They are as it were two different phases of the same *phenomena*. *Guṇa* in the process of change is action, while *karma* when made fixed and permanent becomes a *guṇa*. For instance, the motion of a carriage is action because it may cease at any moment, but

Guṇa distinguished from Dravya and Karma.

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* See *Infra* Notes to Sect. VI and LVII.

† B. P. 85.

‡ V. S. I, 1, 16.

the motions of the earth and the planets are *gunas* because they are permanent and belong as it were to their very nature; Similarly heat which is Guna is produced by motion of molecules, while गुरुत्व or weight produces the action of falling. This distinction is succinctly put in one of the definitions of *Guṇa* given above, द्रव्यावृत्ति-नित्यवृत्ति-जातिमान्, and will be made still more clear by the following extract —"We understand by a *quality* that which truly constitutes the nature of a thing—what it is—what belongs to it permanently, as an individual, or in common with others like it—not that which passes, which vanishes and answers to no lasting judgment. A body falls: it is a fact, an accident; it is heavy: that is a *quality*. Every fact, every accident, every phenomenon supposes a *quatity* by which it is produced, or by which it is undergone; and reciprocally every quality of things which we know by experience manifests itself by certain modes or certain phenomena; for it is precisely in this way that things discover themselves to us."*

It is doubtful whether the *Naiyâyikas* of India had obtained a correct notion of *qualities*, while as to *actions* they do not seem to have gone very deep into the matter. The list of 24 *guṇas* is by no means based on a common *fundamentum divisionis*, while subsequently there is no attempt to probe into the real nature of each.

Number of qualities.

3. The *Tarka-Saṅgraha* like all modern works on *Nyâya* enumerates twenty-four *Gunas*, but the original aphorism of *Kaṇâda* mentioned only seventeen. The *Sûtra* runs:—रूपरसगन्धस्पर्शाः सङ्ख्याः परिमाणानि पृथक्त्वं संयोगविभागौ परत्वापरत्वे बुद्धयः सुखदुःखे इच्छाद्वेषौ प्रयत्नाश्च गुणाः.‡ To this list commentators add seven more, गुरुत्व द्रवत्व स्नेह संस्कार धर्म अधर्म and शब्द, under the shelter of च. *S'aṅkara Mis'ra*, the author of *Upaskara*

* *Dict. des Sciences Philosoph.* quoted in Fleming's *Vocabulary of Philosophy*, p. 398.

‡ V. S. I, 1, 6

explains the omission by saying that these seven are not expressly mentioned in the *Sûtra* because they are too well-known. The addition is expressly made by *Pras'astapâda*.† It cannot at present be ascertained who had the ingenuity of first discovering this hidden meaning of च ; but the fact at any rate shows that there was a time when the system was sufficiently elastic to admit material improvements. The modern school of *Naiyâyikas* reduce the number of *guṇas* to 21, excluding परत्व अपरत्व and पृथक्त्व as being not *guṇas* proper. परत्व and अपरत्व, they say are accounted for by विप्रकृष्टत्व and संनिकृष्टत्व or ज्येष्ठत्व and कनिष्ठत्व, while पृथक्त्व does not differ from अन्योन्याभाव.

4. Others have tried to increase the number of *guṇas* by further additions. T. D. instances 3 *guṇas* which are not expressly mentioned in the list, viz. लघुत्व, मृदुत्व and कठिनत्व, while S. C. adds a fourth आलस्य. These, however, it is argued, need not be considered as separate *guṇas*, as all of them are negations or contradictories of some one of the 24 *guṇas*. Thus लघुत्व is nothing but the negation of गुरुत्व, while मृदुत्व and कठिनत्व are simply different degrees of संयोग. आलस्य is the opposite of प्रयत्न. In this way any quality not mentioned in the list can be shown to fall under one of those already mentioned. On the other hand, if it be asked why both धर्म and अधर्म are mentioned since the latter can only be the opposite of the former, it is answered that the *Naiyâyika* idea of अधर्म is that of something positive, and not simply the negation of धर्म. अधर्म is actual demerit and not the mere absence of merit. The same remark applies to three other pairs of contrary qualities, संयोग विभाग, परत्व अपरत्व, and सुख दुःख. Logically speaking, these are the contraries and not the contradictories of each other. Some include both धर्म and अधर्म under one head अदृष्ट.*

† P. B. *Ben. ed.* p. 10.

* B. P. 161.

Heaviness and lightness.

5. The explanations are no doubt ingenious but there appears to be a good deal of confusion of ideas. In saying that लघुत्व (lightness) is the opposite of गुरुत्व, *Annambhaṭṭa* seems to confound the two senses of the word गुरुत्व, *viz.*, 'heaviness' and 'weight'. लघुत्व is opposed to गुरुत्व in the first sense alone, while in the latter and the wider sense, namely weight, it is only a lesser degree of गुरुत्व, both lightness and heaviness marking different degrees of weight. Similarly मृदुत्व and कठिनत्व or either of them are also entitled to be classed independent qualities like द्रवत्व, for all the three are different degrees of संयोग of particles. आलस्य being identical with स्थितिस्थापकत्व or *inertia* is a positive quality and not merely a negation of effort. The nine qualities from बुद्धि onwards are peculiar attributes or functions of Soul and ought to have been classed separately. The enumeration of *guṇas* in fact is rather rough and unscientific.

Classification of qualities.

6. The twenty-four *guṇas* have been distributed in various ways according to the different principles of division adopted. The *guṇas* are either नित्य or अनित्य, सामान्य or विशेष, एकेन्द्रियग्राह्य, द्वीन्द्रियग्राह्य or अतीन्द्रिय, and so on. Some of these distributions are given below, as likely to be useful to students :—

1. First, the twenty-four *guṇas* are distributed among the nine substances in the following manner :—

स्पर्शादयोऽष्टौ वेगाख्यसंस्कारो मरुतो गुणाः ।
अष्टौ स्पर्शादयो रूपं द्रवो वेगश्च तेजसि ॥
स्पर्शादयोऽष्टौ वेगश्च गुरुत्वं च द्रवत्वकम् ।
रूपं रसस्तथा स्नेहो वारिण्येते चतुर्दश ॥
स्नेहहीना गन्धयुताः क्षितावेते चतुर्दश ।
बुद्ध्यादिषट्कं संख्यादिपञ्चकं भावना तथा ॥
धर्माधर्मौ गुणा एते आत्मनः स्युश्चतुर्दश ।
संख्यादिपञ्चकं कालदिशोः शब्दश्च ते च खे ॥

संख्यादयः पञ्च बुद्धिरिच्छा यत्नोऽपि चेश्वरे ।
परापरत्वसंख्याद्याः पञ्च वेगश्च मानसे* ॥

"The qualities of air are touch, number, quantity (dimension), individuality (severality), conjunction, disjunction, priority, posteriority, velocity and faculty. The same first eight qualities together with colour, fluidity and velocity, are assigned to light.

"Water is the site of 14 qualities, *viz.* of the eight before mentioned (*i. e.* स्पर्शादि), and further, of velocity, gravity, fluidity, colour, taste and viscidity.

"Earth has the same qualities, with the exception of viscidity, and the addition of smell.

"The 14 qualities of the soul are intellect, pleasure, pain, desire, aversion, volition (effort), number, quantity (dimension), severality, conjunction and disjunction, faculty, merit and demerit.

"The qualities of time and place are number, quantity (dimension), severality, conjunction, and disjunction. The same qualities together with sound belong to ether.

"Those five qualities (संख्या, परिमाण, पृथक्त्व, संयोग, and विभाग) together with intellect, desire, and volition (effort), are sited in God; the same five qualities with posteriority and velocity, in the mind."†

II. *Guṇas* are also divided into सामान्य and विशेष. A विशेष गुण is defined द्रव्यविभाजकोपाधिद्वयसमानाधिकरणावृत्ति-गुणत्वावान्तर-जातिमान्‡ which in simple English means a quality that resides in one substance only at one time, and not in two or more substances conjointly. सामान्य *guṇas* are those which reside in two or more substances jointly. The विशेष and सामान्य *guṇas* are enumerated as follow :—

बुद्ध्यादिषट्कं स्पर्शान्ताः स्नेहः सांसिद्धिको द्रवः ।
अदृष्टभावनाशब्दा अमी वैशेषिका गुणाः ॥

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* B. P. 23—33.

† Roer's translation of B. P. *Bibl. Ind.* p. 13.

‡ T. D. p. 60 *Supra.*

संख्यादिरपरत्वान्तो द्रवः सांसिद्धिकस्तथा ।
गुरुत्ववेगौ सामान्यगुणा एते प्रकीर्तिताः ॥°

"Special qualities are: intellect, pleasure, pain, desire, aversion, effort, touch, viscidity, natural fluidity, fate, memory and sound. General qualities are: number, quantity (dimension), severality, conjunction and disjunction, priority and posteriority, derived fluidity, gravity, and velocity."†

III. *Guṇas* are also divided into those which are apprehended by one external sense only (एकेन्द्रियग्राह्य), *viz.* colour, taste, odour, and touch; those which are apprehended by two senses, eye and touch (द्वीन्द्रियग्राह्य), *viz.* number, dimension, severality, conjunction, disjunction, priority, posteriority, fluidity and viscidity; and those again which are not perceived by any external sense (अतीन्द्रिय), *viz.* gravity merit, demerit and faculty.

For other classifications see M. M. Bhimacharya's *Nyâya-Kośa* (second edition) pp. 232–4, and *Bhâshâ-Parichchheda*, 85–97.

SECT. V. कर्माणि.

Motion — *Motion or Action is of five kinds only, viz. tossing or throwing upwards, Dropping or throwing downwards, Contraction, Expansion and Going or Motion in general.*

1. The division of Karma is in strict conformity with the aphorism of *Kaṇâda*.‡ The T. D., as in the case of *Guṇa*, offers two definitions of *Karma* also, of which the first संयोगभिन्नत्वे सति संयोगासमवायिकारणम् is a real one. Motion is the non-intimate cause of conjunction, but is not itself conjunction. The meaning of असमवायिकरण will be explained later on; it is sufficient to note here that only

° B. P. 89—91.
† Roer's Translation of B. P. *Bib, Ind.* p. 53.
‡ V. S. 1, 1, 7.

karma and some *guṇs* can ever be the non-intimate causes of *dravyas* or *guṇas*. *Karma* is supposed to be the non-intimate cause of conjunction, as when a hand touches a book the motion of the hand is such a cause of the conjunction of the hand with the book. But sometimes one conjunction is the non-intimate cause of another conjunction, as for instance, the conjunction of the hand with the book is the non-intimate cause of the connection of the whole body with the book. This conjunction therefore is expressly excluded by the words संयोगभिन्नत्वे सति.

Other definitions.

2. The definition of *Karma* given in *Kaṇâda's sûtra*, is more elaborate though essentially the same. एकद्रव्यमगुणं संयोगविभागेष्वनपेक्षकारणमिति कर्मलक्षणम्* means that action inheres in one substance, but is not a quality, and is the direct and immediate cause of conjunction and disjunction. The first two epithets exclude अवयवि द्रव्य and some qualities like संयोग, while the last is practically idential with संयोगासमवायिकारण of T. D. *S'ankara Mis'ra* mentions several other definitions of *Karma* in his Commentary on V. S. I, 1, 17 (Calc. ed. p. 35). The only one which is worth noting is नित्यावृत्तिसत्तासाक्षाद्व्याप्य-जातिमत्त्वम्, which means that कर्मत्वजाति resides in a thing (कर्म) which is never permanent. The wider genus सत्ता resides in द्रव्य, गुण and कर्म of which the former two are sometimes नित्य ; but कर्म is never नित्य, as it is always transitory. *Karma* is said to last only for five moments,† and so कर्मत्वजाति is said to be नित्यावृत्ति.

3. The division of *Karma* into five kinds does not appear to be very logical. If all miscellaneous motions such as gyration (भ्रमण), evacuation (रेचन), flow (स्यन्दन), flaming up (ऊर्ध्वज्वलन) and slanting motion (तिर्यग्गमन) are to be classed under simple going (गमन), why cannot, it may be

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* V. S. I, 1, 17.

† Roer's Transl. B. P. *Bibl.* p. *Ind.* p. 4 note.

asked, उत्क्षेपण and the other three also be similarly included under it? *Nīlakaṇṭha* justifies this arbitrary division on the quaint but easily comprehensible ground that it would be sacrilegious on our part to question what is laid down by a free-willed sage like *Kaṇâda* (नन्वोत्क्षेपणादीनां गमनेऽन्तर्भावोऽस्त्विति शंकनीयम् । स्वतंत्रेच्छस्य नियोगपर्यनुयोगानर्हस्य ऋषेः संमतत्वादिति भावः) A closer inspection, however, might reveal some sort of principle even in this arbitrary division. Motion is primarily divided into three kinds according to its direction, namely, vertical, horizontal and slanting or miscellaneous. The vertical motion may be from below upwards (उत्क्षेपण), or from above downwards (अपक्षेपण). Horizontal motion also may be twofold, motion nearer to oneself (आकुञ्चन) or motion further from oneself (प्रसारण). All other motions are relegated to the comprehensive class of गमन. It is not of course meant that the above groups exactly correspond to the ordinary conceptions of उत्क्षेपण etc.; but that some such principle was in the mind of the *Sûtrakâra* when he made the division seems to be highly probable.

SECT. VI. सामान्यम्.

Genus or Generality is of two kinds, wider or extensive and narrower or limited.

1. In Section LXXVII *Annambhaṭṭa* defines सामान्य as नित्यमेकमनेकानुगतम्, and adds that this सामान्य resides in *Dravya*, *Guṇa* and *Karma*. There are three characteristics of *generality*: that 1 it is eternal, 2 it is one, and 3 it resides in many. Conjunction and some other qualities such as द्वित्वादिसंख्या reside in many, but they are not eternal, and therefore the word नित्य in the definition of सामान्य excludes them. The dimension of an atom is both eternal (for atom is eternal) and resides in many; but it is not *one* residing in many (एकमनेकानुगत) and hence the word एकम्. 'अत्यन्ताभाव however

Generality

is eternal, one and residing in many. Therefore the word अनुगतम् is interpreted as समवेतम् or समवायसंबन्धेन वर्तमानम्, thereby excluding negation which does not reside in things by *intimate* union, while सामान्य does. The word *Genus* is a convenient rendering of सामान्य as Ballantyne and others have adopted it, although it is not quite accurate. Genus may perhaps be a more appropriate rendering of जाति. Genus in English not only means the common characteristic residing in several individuals, but comprehends the individuals also, while सामान्य or जाति denotes only the common characteristic. Genus is a class, सामान्य or जाति is the common attribute which distinguishes that class. Other definitions of सामान्य are, नित्यत्वे सत्यनेकसमवेतत्वम् and नित्यत्वे सति स्वाश्रयान्योन्याभावसमानाधिकरणम् which are however not as good as that given by T. D. But they all imply that सामान्य was conceived by later *Naiyâyikas* to be some attribute having a real external existence in the individual objects comprised in it. The original aphorism of *Kaṇâda* is ambiguous and conveys a somewhat different notion. सामान्यं विशेष इति बुद्ध्यपेक्षम्* conveys the sense that the notion of generality depends on the operation of our own intellect. A quality becomes a सामान्य only if we conceive it as residing in many; while the same is विशेष when we regard it as a differentia. A property for instance exists in a certain number of objects, which are so far of one kind; if we use the property for grouping those objects into one class, it is सामान्य, if for distinguishing them from all other objects in the world, it is विशेष. Thus an attribute, though inhering in the object, cannot become a सामान्य until our intellect has recognised it to be so. As long, for example, as I have seen only one elephant and do not know that there are others of the same kind, the genus elephant does not exist, at least so far as I am concerned. Similarly the same attribute, e. g. घटत्व, is सामान्य if regarded as residing in all pots, and is a विशेष if regarded as distinguishing pots from other things. Such seems to have been the original conception, but subsequently सामान्य appears to

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* V. S. I, 2, 3.

have come to be regarded as an attribute having an absolute and not merely a relative existence externally.

Varieties of Sâmanya

2. In later times सामान्य came to be used synonymously with जाति, and was given an independent and eternal existence apart from the individual objects. This will be clearly seen from the various divisions of सामान्य. *Annambhatta*, following the commentators on *Kanâda's* aphorisms divides सामान्य into पर and अपर, higher or extensive and lower or non-extensive. The instances are सत्ता (existence) and द्रव्यत्व (substantiality) respectively. Of course the terms पर and अपर are relative only, the same attribute द्रव्यत्व for instance being अपर with respect to सत्ता and पर with respect to घटत्व. Some other writers make a threefold division of सामान्य. The T. A. for example divides सामान्य into व्यापक (widest) *e. g.* सत्ता, व्याप्य (narrowest,) *e. g.* घटत्व and व्याप्यव्यापक (middle) *e. g.* द्रव्यत्व. This division obviously regards the common characteristic as existing in itself and absolutely, while the former two-fold division only sought to fix its relative extent as compared with higher or lower generalities. द्रव्यत्व can be sometimes पर and sometimes अपर, but सत्ता must always be व्यापक, and द्रव्यत्व only व्याप्यव्यापक. The terms in the former division were relative; in the latter they are absolute. This is not the place to discuss which division is more consonant with reason, but it may be noted that the latter though apparently simple is beset with difficulties from which the former is free. *Annambhatta* therefore was justified in disapproving of the threefold division, if we may accept the interpretation of the word इति after परमपरं च as given by V. V., which remarks अत्रेतिशब्दस्य स्वसमभिव्याहृत-पदार्थतावच्छेदक-परत्वापरत्वरूप-द्विप्रकारवत्सामान्यमिति वाक्यार्थः.

Jâti and Upâdhi.

3. सामान्य is again divided into two sorts, अखण्ड and सखण्ड. The first is otherwise called जाति and is defined as साक्षात्सम्बद्धं सामान्यम्, that which is directly connected with the thing such as द्रव्यत्व कर्मत्व etc. The second is called उपाधि and is defined as

परंपरया सम्बद्धम्, indirectly or mediately connected with the object, such as प्रमेयत्व इन्द्रियत्व etc. Every common characteristic does not constitute a *jâti*. A number of persons might be blind or lame or black, but blindness lameness or blackness does not constitute an independent class. The circumstances which prevent a common characteristic from becoming a *jâti* are summed up in the following verse of *Udayanâchârya*:—

व्यक्तेरभेदस्तुल्यत्वं सङ्करोऽथानवस्थितिः ।
रूपहानिरसम्बन्धो जातिबाधकसङ्ग्रहः ॥

The circumstances that prevent *generality* from becoming a class are six: (1) Unity of the object, *e. g.* the sky being one all-pervading thing, there is no *jâti* as आकाशत्व; (2) Identity of things though the names be different, *e. g*, घटत्व and कलशत्व are not different *jâtis* as both words denote the same thing; (3) Cross-division, *e. g.* भूतत्व and मूर्तत्व are not *jâtis* as they constitute cross-divisions, आकाश being भूत and not मूर्त, and मनस् being मूर्त but not भूत, while the remaining four, पृथ्वी, अप्, तेजस् and वायु, being both भूत and मूर्त; (4) Want of finality, *e. g. jâti* itself cannot have *jâti* on it, for in that case, there being *jâti* over *jâti ad infinitum*, there will be no finality; (5) Violation of essence, *e. g.* the *Viśeshas* (particularities), though innumerable, cannot have a *jâti* विशेषत्व on them, because by hypothesis they are essentially opposed to the conception of *jâti*; (6) Lastly, want of proper connection prevents *jâti*, *e. g.* समवायत्व cannot be a *jâti* because, as every *jâti* rests on its आश्रय by समवायसम्बन्ध, there cannot be a समवाय on समवाय, and समवायत्व, if accepted as a *jâti*, cannot have any connection with its आश्रय. All these therefore are mere *Upâdhis*. The student will now be able to understand *Annambhaṭṭa's* remark that सामान्य, or more properly its one variety the *jâti*, can rest on *Dravya*, *Guṇa* and *Karma* only, and cannot rest on the last four *Padârthas*. Even amongst the first three there are many things that cannot have जाति, such as ether, time and space. It will be seen from the above that उपाधि is any characteristic which belongs to several individuals, while जाति is only a particular kind of them, fulfilling certain conditions necessary to consti-

tute a proper class. These conditions are implied by their opposites in *Udayana's* verse quoted above. If you take a hundred persons you can arrange them in various groups, as for instance by their nationality, or the language they speak, or the complexion of their body, or by their education. But each of these groups cannot constitute a class, for in that case there will be the absurdity of one person belonging to several classes, and all notions of genus and species will be confounded. Human being is a class because we can at once recognize certain well-marked characteristics which clearly distinguish human beings from all other animals; but blackness cannot be a class, for if it be so we shall have to group black men in the same class as black sheep or black stones. This distinction between जाति and उपाधि is very important and is one of the subtlest discovered by Indian logicians.

SECT. VII. विशेषाः.

The Individualities or Particularities residing in eternal things are innumerable.

Particularity.

1. The idea of विशेष, particularity, (called अन्त्यविशेष by *Kanâda*) is a counterpart of that of सामान्य (generality), as the one necessarily implies the other. In Sect. LXXVIII, *Annambhatta* defines विशेष as residing in eternal substance and serving the purpose of distinguishing them from each other, while this section further tells us that those particularities are innumerable, one being assigned to each eternal substance. A more accurate definition of विशेष is स्वतो व्यावर्तकत्वम्, that which distinguishes self from itself. The peculiarity of a *Ves'esha* is that it performs the double function of differentiating one eternal substance from all others, and also that of differentiating itself from other *Viśeshas* and everything else. The latter assumption is necessary, because otherwise we shall have to suppose a second *Viśesha* over the first to differentiate it from others and so on *ad infinitum*.

2. The eternal substances in which *Viśeshas* inhere are the atoms of the first four substances, earth, water, light and air, together with the remaining five substances, ether, time, space, soul, and mind.

3. Other definitions of *Viśesha* are जातिरहितत्वे सति नित्यद्रव्यमात्रवृत्तिः, एकमात्रसमवेतत्वे सति सामान्यशून्यः and अत्यन्तव्यावृत्तिहेतुः, all of which amount to the same thing, namely, that *Viśesha* is a *padârtha* assumed to account for the difference of atoms and other eternal substances from one another. The necessity of this assumption is established by S. C. thus:—" घटादीनां कपालसमवेतत्वादिकं पटादिभेदकमस्ति, परमाणूनां तु परस्परभेदकं न किञ्चिदस्त्यतोऽनायत्या विशेष आश्रयितव्यः " A jar is distinguished from a piece of cloth because the component parts of the first are distinct from those of the latter (अवयवभेदादवयविभेदः), and so on we may argue until we arrive at the ultimate constituents of matter, namely the atoms. But as an atom has no parts, we cannot account for the distinction of one atom from another by the same process of reasoning. Similarly we cannot account for the mutual distinction of other imperishable substances such as ether, time and space. There is therefore no help (अनायत्या of S. C.) but to assume a separate individuality in each of these substances to account for its distinctive character. This individuality is called the विशेष of that substance, and they are as innumerable as the atoms and other eternal substances. It is not right to translate this विशेष by ' difference ' or ' differentia,' because the latter words denote the special characteristics of a species as distinguished from genus, while विशेष concerns the individual only.*

Why Viśesha is recognized.

4. This doctrine of विशेष is supposed to be a peculiar tenet invented by the *Vaiśeshikas*, and one from which they derive their appellation; but it is singular that the original aphorisms of *Kaṇâda* do not give much prominence to it. It is referred to

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* See Bain's Deductive Logic p. 73.

only incidentally as it were, in the *Sûtra* अन्यत्रान्त्येभ्यो विशेषेभ्यः* which, while treating of सामान्य, distinguishes its occasional विशेषत्व† from the well-known ultimate *Viśeshas*, that are called final, because they reside in the final atoms of matter. On this bare reference the commentator *Praśastapâda* founds the theory of विशेष which is however wholly repudiated by many of the modern *Naiyâyikas* who are otherwise followers of the *Vaiśeshika* school. They argue that, granting that *Viśeshas* are necessary to distinguish individual atoms, there must be something else to distinguish the *Viśeshas* themselves from one another. If however it is said that the latter function is done by the *Viśeshas* themselves by some peculiar inherent faculty, why not then attribute this inherent faculty to the atoms themselves. If you have to bring in the inherent faculty somewhere, why not suppose it in the individual atom itself and discard the superfluous *Viśesha* altogether, rather than first attribute a *Viśesha* to the atom and then attribute the inherent faculty of self-distinction to the *Viśesha*? The argument is irresistible but not a new one. *Praśastapâda* the oldest known commentator on *Vaiśeshika Sûtra* already anticipates and answers it thus:—"अथान्त्यविशेषेष्विव परमाणुषु कस्मान्न स्वतः प्रत्ययव्यावृत्तिः प्रत्यभिज्ञानं वा कल्प्यत इति चेन्न, तादात्म्यात्। इह तादात्म्यनिमित्तप्रत्ययो भवति, यथा घटादिषु प्रदीपात्। न तु प्रदीपे प्रदीपात्। यथा च श्वमांसादीनां स्वत एवाशुचित्वं तद्योगादन्येषां तथेहापि तादात्म्यादन्त्यविशेषेषु स्वत एव प्रत्ययव्यावृत्तिस्तद्योगात्परमाण्वादिष्विति.‡ The answer however is hardly satisfactory. It is of course scarcely needful to say that the doctrine of *Viśesha* is not accepted by other Indian schools of philosophy such as the modern *Naiyâyikas*, the two sections of the *Mîmâṁsakas*, namely, the *Bhâṭṭas* and the *Prâbhâkaras*, and the *Vedântins*.

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* V. S. I, 2, 6.

† See V. S. 1, 2, 3, and our Note under Sect. VI. on p. 90 *Supra*.

‡ P. B. Ben. ed, p. 322.

SECT. VIII. समवायः

Intimate Union is one only.

1. समवाय etymologically means the act of coming together closely, and is therefore used to denote a kind of 'intimate union' between two things which are thereby rendered inseparable so that they cannot be separated without themselves being destroyed. It is therefore more appropriate to translate समवाय by 'intimate union' rather than by co-inherance as Ballantyne has done. *Annambhatta* defines समवाय in Sect. 79 as "a permanent connection existing between two things that are always found inseparable." The समवाय is called नित्य-सम्बन्ध in contradistinction to संयोग which is a *guna* and is always अनित्य. The expression अयुतसिद्ध denotes things one of which is always dependent on the other, as the jar on its components or the quality on the substance. अयुतसिद्ध is the opposite of युतसिद्ध which may be taken to mean either 'proved to be joined' or 'proved to be separated,' according as we take the verb यु in the sense of 'to join' or 'to separate.' In either case the meaning of युतसिद्ध is the same. In the first sense युतसिद्ध means things which are proved to have been actually joined and therefore which must have once existed in a state of separation, while in the latter sense युतसिद्ध simply denotes things which are proved to have once been separated. Those things therefore which are not thus proved, that is, which have never existed in a separate condition are अयुतसिद्ध. The two halves of a jar were separate before they were joined together; their connection therefore is संयोग which can be destroyed at any moment by separating them again. But the jar never existed and can never exist separately from the two halves; the connection of the jar with the halves is therefore समवाय. These अयुतसिद्ध things are limited in number. In fact there are only five pairs of things between which समवाय is supposed to exist, *viz.* 1 the product and its parts (अवयवावयविनौ), 2 the quality and the qualified (गुणगुणिनौ), 3 the motion and the moving (क्रियाक्रियावन्तौ), 4 the indivi-

dual and the common characteristic (जातिव्यक्ती), and lastly ॸ particularity and the eternal substance in which it inheres (विशेषनित्यद्रव्ये). The definition in the *Sûtra* is simpler and less comprehensive इहेदमिति यतः कार्यकारणयोः स समवायः,* from which it may be inferred that the notion of समवाय was crude at first, and must have been gradually developed by later writers.

Samavâya is one and eternal

2. In Sect. VIII *nambhatta* emphatically says that सम य is one and one only, in order to repudiate the position of the *Prâbhâkara Mîmâmsakas* and a modern school of *Naiyâyikas*. These latter deny even नित्यत्व to समवाय. The नित्यत्व of समवाय is proved by the argument that as all positive products (भावकार्य) are generated in their material cause by समवाय relation, a समवाय if produced will require another समवाय and so on *ad infinitum*. समवाय therefore must be regarded unproducible *i. e.* नित्य. Of course this नित्यत्व is only relative, and not absolute such as that of an atom. समवाय is नित्य in the sense that it can neither be produced nor destroyed without producing or destroying the product. Now comes the question-why this separate entity of समवाय is recognized at all. Here there is a difference of opinion between the *Naiyâyikas* and the *Vaiśesikas*, or the old and the modern schools, as S. C. calls them. The former hold that समवाय is observed by perception, and therefore no other proof is required to prove its existence. The *Vaiśeshikas* however, of whom *Annambhaṭṭa* is one, deny perceptibility to समवाय, on the ground that a connection is perceptible only when the two connected things are perceptible, while समवाय often exists between things one of which (*e. g.* आकाश , the समवायिकारण of शब्द) may be imperceptible. In their opinion समवाय is proved by inference only, and the argument is often put as *Annambhaṭṭa* has put it in his commentary on Sect. 79.

* V. S. VII, 2, 26.

The doctrine of Samavâya.

3. The doctrine of समवाय is very important and may in one sense be said to be the corner stone of *Nyâya* philosophy. It is the समवाय that explains the phenomenon of causality as conceived by the *Naiyâyikas*; and it is this theory that makes them so intensely realistic, in marked opposition to idealistic schools like the *Vedânta*. The conception of समवाय is in fact a key to the whole theory of causation as viewed from the *Nyâya* standpoint, and consequently the doctrine has been strongly animadverted by writers of the *Sânkhya* and *Vedântic* schools who hold different views. The *Bhâtta Mîmâmsakas* also agree with the latter in repudiating समवाय. The theory of atoms for which the *Naiyâyikas* have been so famous is but a necessary result of the doctrine of समवाय. *Śankarâchârya*, in his commentary on *Brahma-Sutra* II. 2. 13, lays his finger accurately on the weakest point in the समवाय theory, namely, the inconsistency of calling समवाय a connection between two distinct things, and at the same time regarding it as of a totally different kind from संयोग. If संयोग exists on the संयोगि *dravyas* by समवाय, समवाय also requires another समवाय to exist on the समवायिs; and so there is the absurdity of an *ad infinitum*. To avoid this difficulty समवाय is regarded as a distinct *padârtha* and not a *guṇa*; and the *Naiyâyikas* add that the first समवाय does not rest upon the समवायि by another समवाय but is identical with it. Why then, rejoins the *Vedântin*, do you not take संयोग to be identical with the संयोगिs. As to संयोग being a *guṇa* and समवाय an independent *padârtha*, says the *Vedântin*, that is a technicality of your own invention, and we do not accept it. It cannot also be said that समवाय being नित्य is of a different kind from संयोग, and must be treated differently, for संयोग also is sometimes eternal, as for example the संयोग of काल or आकाश with परमाणु, while समवाय itself is not truly eternal, it being liable to destruction by the destruction of the product. But the chief

objection against समवाय is that, if समवाय is to be regarded as identical with its कार्य and कारण, would it not be better and simpler (लाघव) to regard the कार्य itself as identical with the कारण? Hence the *Vedântins* and the *Sânkhyas* hold the cause and its product to be connected with each other not by समवाय, but by the relation of identity (तादात्म्य). The doctrine of अयुतसिद्ध on which that of समवाय depends is also ruthlessly criticized by *S'ankarâchârya.** The gist of his criticism is that the notion of cause and effect being अयुतसिद्ध, that is, being connected together in an inseparable union, is directly opposed to the hypothesis that the cause is always anterior to the effect. As a matter of fact the cause and the effect are one and the same thing, and not two different things joined together inseparably by a fictitious union called समवाय. The whole realistic theory of the *Naiyâyikas* is therefore based on a fiction which has no basis in actual experience. This is not the place to go deeper into this controversy which has been vigorously carried on between the rival disputants from the earliest to the latest times; but what has been said will be sufficient to give the student an idea as to how the doctrine of समवाय and the theory of causation built upon it lie at the very root of the whole *Nâyya* system of philosophy.

SECT. IX. अभावाः

Negation is of four kinds;—Antecedent, Consequent, Absotute and Reciprocal.

Negation.

1. The ninth section only enumerates the four kinds of negations, reserving the definitions of each for a future occasion. They are *antecedent negation* or non-production, *consequent negation* or destruction, *absolute negation* and *reciprocal negation.* The word *negation* used by Ballantyne conveys the idea of *Abhâva* better than *non-existence*, which is hardly applica-

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* *Brah. Sût.* II, 2, 17.

ble in the case of अन्योन्याभाव. *Antecedent negation* is that which exists before a thing is produced, and the *consequent* results after its destruction. *Absolute negation* exists always and in all places except where the thing itself is. *Reciprocal negation* is the denial of one thing being any other, such as a jar not being piece of cloth.

2. Other writers divide अभाव first into two kinds, अन्योन्याभाव and संसर्गाभाव, and then split the latter into the remaining three. Thus *Viśvanâtha* says in *Bhâshâ-Parichchheda*:—

अभावस्तु द्विधा संसर्गान्योन्याभावभेदतः ।
प्रागभावस्तथा ध्वंसोऽप्यत्यन्ताभाव एव च ॥
एवं त्रैविध्यमापन्नः संसर्गाभाव इष्यते ।*

2. Mutual or reciprocal negation may be defined as the negation of identity. All other kinds of negation are grouped under संसर्गाभाव which, literally translated, means negation by contact, the contact being between the thing negatived and thing on which its negation is affirmed. Thus when we say इह भूतले घटो नास्ति we affirm the negation of घट on a particular spot. Similarly the antecedent and the emergent negations also are affirmed with reference to some external अधिकरण, with which they are said to be connected, while अन्योन्याभाव simply denotes the mutual non-identity of two things. In short, in both kinds of अभाव, viz. संसर्ग and अन्योन्य, there are always two things referred to; but in the first, one is negatived of the other, while in the other, both are negatived of each other. Thus an अन्योन्याभाव may be resolved into two संसर्गाभावs. For instance घटः पटो नास्ति is a proposition affirming the mutual negation of घट and पट; and it may be split up into two propositions घटे पटत्वं नास्ति and पटे घटत्वं नास्ति, both of which are examples of संसर्गाभाव. In अन्योन्याभाव the words expressive of the two things are always in the same case, *i. e.* the nominative; while in the other case one word is usually in the locative as denoting the अधिकरण on which the negation rests. संसर्गाभाव is divided into प्रागभाव, प्रध्वंसाभाव and अत्यंताभाव, of which the first two are nothing else but the non-produ-

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* B. P. 11, 12.

ction and destruction of a thing. अत्यन्ताभाव is absolute negation, and comprises all varieties other than those mentioned. A discussion as to its exact nature will be found under Sect. 80.

Abhâva defined

3. The simplest definition of अभाव is भावभिन्न, what is distinct from existing things, but other definitions are more elaborate. S. C. defines अभावत्व as प्रतियोगिज्ञानाधीनविषयत्वम्, *i. e.* a *padârtha* the knowledge of which is dependent on the knowledge of its contradictory. S. M. defines it as द्रव्यादिषट्कान्योन्याभाववत्वम् a *padârtha* in which rest the mutual negations of all the other six *padârthas*, *i. e.* which is distinct from the six catagories, substance etc. While really meaning the same as भावभिन्नत्वं, this definition begs the question by inserting अन्योन्याभाव, a sub-variety of अभाव, into the definition of अभाव. It is therefore faulty. A third definition, given in *Sarva-Darśana-Sangraha*, is असमवायत्वे सत्यसमवायित्वम्, *i. e.* अभाव not being itself समवाय is not connected with anything else by समवाय.* *Naiyâyikas* hold that अभाव is an object of direct perception and is connected with its अधिकरण by the relation called विशेषणता; that is, when we say घटाभाववद्भूतलम् we regard घटाभाव as an attribute of भूतल, just as we call दण्ड the attribute of दण्डी. This peculiar conception of negation discloses the habit of *Naiyâyikas* to invent any number of fictitious conventionalities, if they are convenient for practical purposes. Really speaking, to class अभाव as a *padârtha* along with the other six is an absurdity. There is not the least resemblance between the two groups, as one is the direct opposite of the other. अभाव can be a *padârtha* only in the most literal sense of the word, namely, the connotation of a word (अभाव), but really speaking it cannot be said to have any external existence. It is *non-existence* pure and simple, and all varieties of it such as the non-existence of this thing and that thing are mere conventionalities of speech. In what respect, for instance, does a घटाभाव differ from a पटाभाव? Really in nothing essentially, for both agree in their simple

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* *Sarv, D. S.* Calc. ed. p. 109.

character of negation. But one might say that we find घटाभाव even where there is a पट, and *vice versa*; and therefore the two negations must be different. But this means that we only attribute the difference of the things (प्रतियोगि) to their negations. In other words, the भेदबुद्धि on the अभाव is simply आरोपित, while as a matter of fact all negation is pure and characterless. It follows that अभाव cannot really be the विशेषण of भूतल, for a विशेषण, in order to be apprehended, must exist, while the essence of अभाव is non-existence. *Vedântins* and others therefore who refuse to recognize अभाव as a *padârtha* regard it simply as कैवल्यरूप, that is, as भूतल itself and nothing more.

4. It seems that the *Vaiseshikas* had not originally conceived of अभाव as a separate *padârtha*. *Kanâda's* aphorism* enumerates only six *padârthas*, omitting अभाव altogether. But the ingenuity of commentators has added a seventh category अभाव as being intended though not expressed by the *Sûtrakura*, the intention being gathered from the occurrance of the word अभाव in some other *Sûtras*, such as "कारणाभावात् कार्याभावः† and असतः क्रियागुणव्यपदेशाभावादर्थान्तरम्. "‡ To recognize a separate entity because a word expressive of it occurs somewhere in a work is not indeed a very strong argument. Similarly *Udayanâchârya* in his *Kiranâvali* remarks " एते च पदार्थाः (the six mentioned in V. S. 1, 1,3) प्रधानतयोद्दिष्टा अभावस्तु स्वरूपवानपि नोद्दिष्टः प्रतियोगिनिरूपणाधीननिरूपणत्वात् न तु तुच्छत्वात्. This is more like an apology for the non-mention of अभाव in the original *Sûtras* than an agument for recognizing it as a separate *padârtha*. Whatever be the case, the recognition of अभाव as an independent entity has been a distinct gain to Indian logic, in as much as it has greatly facilitated the processes of analysis and reasoning. Even those who deny it the status of a *padârtha* cannot often help clothing their propositions in its terms. The wonderful accuracy of Indian syllogism is in a great measure due to the use of such fictitious but well-understood expressions as अभाव, प्रतियोगि and अनुयोगि.

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* V. S I, 1, 4. † V. S. 1, 2, I. ‡ V. S. IX, 1, 3.

5. Here ends the first chapter of *Tarka-Sangraha*, which S. C. names पदार्थोद्देशविभागनिरूपणम्. According to the well-known dictum of the scholiast, the *Vaiśeshika* system consists of three parts, the enumeration, the division and the definitions of *padârthas*. The author of *Tarka-Sangraha* first enumerates the *Padârthas* in the second section, and then proceeds to state their divisions and subdivisions in Secs. 3 to 9. From the tenth section onwards he enters upon their definitions or स्वरूपकथन severally, and defines them in the order in which they have been enumerated.

SECT. X. पृथिवी.

Earth is one that has odour. It is of two sorts, eternal and non-eternal. Eternal is atomic, non-eternal is product. It is also threefold, body, organ and object. Body is that like ours; organ is the olfactory sense at the tip of the nose; object comprises the earthy stones and the like.

Earth.

1. The author defines earth as गन्धवती 'having odour,' which means गन्धसमवायिकारणम्, the intimate cause of odour.* The relation expressed by the termination वत् here is समवाय only, for otherwise the definition will overlap on *time* and *space*, with which गन्ध is connected by कालिक and दैशिक relations respectively. Besides the apparent अतिव्याप्ति on *time* and *space*, the T. D. notices three other objections against the definition: 1st, it will not apply to a product which, being composed of parts having both good and bad smells, is rendered odourless owing to the two kinds of smell being mutually destroyed; nor can it be said that in that case perception of odour is rendered impossible. You will have therefore, says the opponent, either to recognize a चित्रगन्ध 'variegated odour,' which you do not, or your definition will be inapplicable to such a case. The author denies both alternatives, saying that in such cases we can distinctly apprehend the different odours of component parts, and so there is no need of recognizing one variegated odour of the whole. The second objection is the same as in the case of द्रव्यत्व as

* S. M. Calc. ed. p. 21.

a definition of *Dravya*, viz. that it will not apply to a product in the first moment of creation, when it is supposed to be without attribute. The answer to the present objection is also the same, viz. amplification of the definition (p. 77). The third objection is drawn from our experience that even water and other substances besides earth possess smell. The answer is that the smell belongs not to the water but to earthy particles mixed with it. There is a fourth objection which the author does not notice. We see many earthy things such as stones which are odourless, and the definition may not apply to them; but the answer would be that the smell in them is अनुद्भूत, that is, though existing, it is not perceived owing to unfavourable circumstances.

Its attributes.

2. Although odour is mentioned as the differentiating attribute of earth it is not its only attribute. *Kaṇâda's* aphorism रूपरसगन्धस्पर्शवती पृथिवी* describes earth as possessing four qualities colour, savour, odour and touch, which *Śankara Miśra* construes as giving four alternative definitions of earth. Besides these four material qualities, earth is credited with ten others, making in all 14 qualities residing in earth, for which see quotation *Supra*. p. 85.

3. Four copies A B D and K add तत्र before गन्धवती, but the *pratîkas* in all the copies of *Dîpikâ* except A, as well as that in S. C. show that the sentence began with गन्धवती, and that the तत्र got into the text by error, probably from the opening sentence of the *Dîpikâ*. The तत्र in the *Dîpikâ* is explained by *Nîlakaṇṭha* as पृथिव्यादिषु (नवद्रव्येषु) मध्य इत्यर्थः.

Earth eternal and non-eternal

4. Earth is first divided into eternal and non-eternal: the first being atomic, and the second a product. T. D. defines नित्यत्व as ध्वंसाप्रतियोगित्वम्, its contrary ध्वंसप्रतियोगित्वम् being अनित्यत्व. That which is not liable to destruction is eternal, and its opposite is the non-eternal. These definitions of T. D. are however incomplete. *Vâkya-Vritti* defines नित्यत्व and अनित्यत्व more correctly, as नित्यत्वं प्रागभावाप्रतियोगित्वे सति ध्वंसाप्रतियोगित्वम् and

* V. S. II, 1, 1.

अनित्यत्वं प्रागभावप्रतियोगित्वध्वंसप्रतियोगित्वान्यतरवत्त्वं बोध्यम्. The T. D. does not take into account past as well as future eternity, and consequently its definition of नित्यत्व overlaps on प्रध्वंसाभाव which, being indestructible, is ध्वंसाप्रतियोगि, but which is not नित्य as it has प्रागभाव. There are some however who regard ध्वंस as eternal; and according to them T. D's definitions will be correct. नित्यत्व is also defined in another and a simpler way as त्रैकालिक-संसर्गावच्छिन्नत्व, "being distinguished by a connection with the three times, past, present and future", *i.e.* existing in all times. Whichever definition we take, products are always अनित्य as they do not exist prior to their production. The eternal portion of earth is the atoms which are the ultimate material causes of all earthy products. The atomic theory of the *Vaiseshikas* will be explained later on. (See note Sect. XIII.)

Another division

5. Earth is again divided into three kinds, body, organ of sense and mass. The body is that which belongs to human beings like ourselves; the organ is that of smell which apprehends odour and is situated at the root of the nose; while mass comprehends all other earthy things, such as stones etc. This threefold division of earth is very ancient, being derived from the aphorism of *Kaṇâda.** But there is a difference of opinion as to whether this threefold division is of पृथिवी in general or of कार्यरूपा पृथिवी only; and the controversy, so far as we are concerned, turns partially, if not mainly, on the correct reading of the passage in *Tarka-Sañgraha*. A reads सा पुनस्त्रिविधा, but as all other copies of the text as well as the commentaries agree in omitting सा before पुनः there was no alternative but to omit it here also. The reading सा can be defended on the ground that by unmistakably applying the threefold division to कार्यरूपा पृथिवी it makes the meaning of the passage clear, and thus brings the text into harmony, not only with other works like P. B., S. P., S. M., and others, but also with the *Kaṇâda's aphorism* तत्पुनः पृथिव्यादि कार्यद्रव्यं त्रिविधं शरीरेन्द्रियविषयसंज्ञकम्†. The word सा however is not absolutely necessary, since S. C. extracts the same sense out of the word पुनः. The chief objection against सा, as also against

* V. S. IV, 2, 1. † *Ibid.*

the interpretation put on the passage by S. C. to make it conform with the works mentioned above, is that the interpretation does not agree with T. D.'s note on the passage प्रकारान्तरेण विभजते. The remark apparently shows that the threefold division is not a sub-division of one of the two kinds of पृथिवी first mentioned, namely कार्यरूपा, but an altogether independent division of पृथिवी itself. Having divided earth into eternal and non-eternal, the author mentions another division of the same according to its forms and functions. But here comes the question, does *Annambhaṭṭa* say something which is in direct opposition to *Kaṇâda's Sûtra* ? The *Sûtra* distinctly ascribes the three-fold division to product earth only; and the scholiast *Praśastapâda* also clearly states his opinion by remarking त्रिविधं चास्याः कार्यं । शरीरेन्द्रियविषयसंज्ञकम् । * *Annambhaṭṭa*, by taking in the whole earth (eternal and non-eternal), would be plainly contradicting the *Sûtra* and the scholiast, which is highly improbable as the present work is distinctly based on *Praśastapâda's* scholium. As a matter of fact, whichever interpretation we take, the ultimate result, as observed by *Nīlakaṇṭha*, is the same, namely, that laid down in the *Sûtra*. *Nīlakaṇṭha* noticing these two ways of interpretation remarks अत्र नित्यपृथिव्याः शरीरेन्द्रियभिन्नत्वरूपविषयलक्षणाक्रांतत्वेन विषयांतर्गतत्वामिति पृथिव्यास्त्रिविधत्वमत एव मूले पुनस्त्रिविधेत्युक्तिः संगच्छत इति ध्येयम्. Even if the three-fold division be ascribed to पृथिवी in general, it does not apply to नित्या पृथिवी, that is, atoms, as all the atoms obviously fall into the third of the latter three divisions *i. e.* विषय. In other words, नित्या पृथिवी instead of being the genus of the latter three kinds becomes a variety of one of them. In this way the passage in T. *D.* can be made to agree with the *Sûtra*, and both views reconciled.

The three varieties of earth.

6. शरीर is defined as आत्मनो भोगायतनम्, but a more accurate definition is अन्त्यावयवित्वे सति चेष्टाश्रयम्, that is, a final product which possesses voluntary action. अन्त्यावयवित्व is defined as अवयवज-

* P. B. Ben. ed. p. 27.

न्यत्वे सत्यवयवजनकत्वम्, a thing which is produced from parts but does not itself become a producer of another product, such as a jar. Our body is such a final product, because it does not constitute a part of any other larger product;

Body.

and it possesses the additional character of being the seat of voluntary actions. चेष्टा is defined as हिताहितप्राप्तिपरिहारार्थक्रिया an act which conduces to the acquisition of the desirable and prevention of the undesirable. A hand or a foot is also the seat of such चेष्टा, but it is not a final product as it forms a part of a larger body. Body is divided into योनिज embryonic, and अयोनिज non-embryonic. The first is शुक्रशोणितमेलनजन्य and belongs to human beings, quadrupeds, birds etc. The second kind is possessed by insects born of perspiration, plants and semi-divine personages, like the sage *Manu*, who were self-born owing to the influence of अदृष्ट. This classification comprehends the whole Biology of the *Naiyâyikas.*

7. The second division of earth is organ of sense, which is also limited to animate nature. इन्द्रिय is de-

Organ.

fined as शब्देतरोद्भूतविशेषगुणानाश्रयत्वे सति ज्ञानकारणमनःसंयोगाश्रयम्. "An organ of sense is the seat of that contact of mind which produces knowledge, but is not the seat of any manifested special qualities except sound." The *Naiyâyika* theory of perception is given by S. C. thus.— आत्मा मनसा संयुज्यते मन इन्द्रियेणेन्द्रियमर्थेन ततः प्रत्यक्षम्. "The organ is united with the external object on the one hand and is on the other connected with the mind which acts as a link with the soul." So the contact of the mind is with two things at once, viz. the soul and the organ, and both are the causes of knowledge. The first part of the definition therefore ending with सति is therefore inserted to exclude the soul, who is the seat of 14 special qualities,* while the organ of sense possesses none. But then one might object that as the organs of sense such as smell and sight partake of the nature of their respective constituents, *viz.* earth and light, they must possess odour and colour, the special qualities of

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* See quotation p. 85-6 *Supra.*

earth and light. The answer is that they do possess them, but the qualities are not manifested in them, and hence the word उद्भूत is inserted to qualify विशेषगुण. In this form however the definition becomes too narrow, because it does not apply to श्रोत्र, the organ of hearing, which being by hypothesis आकाशस्वरूप possesses one उद्भूतविशेषगुण *viz.* शब्द. This defect is removed by excluding शब्द (शब्देतर) from the special qualities that are not manifested in an organ of sense. In this way the definition is made to denote an organ alone. Other and perhaps simpler definitions of इन्द्रिय are शरीरसंयुक्तं ज्ञानकारणमतीन्द्रियम्* and स्मृत्यजनक-ज्ञानजनक-मनःसंयोगाश्रयत्वम्.† In the first of these अतीन्द्रिय excludes the Soul and external objects, while शरीरसंयुक्तम् excludes निर्विकल्पज्ञान which being अतीन्द्रिय is the proximate cause of सविकल्पज्ञान. In the second definition the words स्मृत्यजनक exclude the Soul. इन्द्रिय is of two kinds, the internal (अन्तरिन्द्रिय) which is mind, and the external (बहिरिन्द्रिय) which are five, *viz.* the organs of sight, hearing, taste, smell and touch, corresponding to the five elements. Of these the organs of smell, taste and hearing apprehend qualities only, while the rest apprehend substances as well as qualities.

8 The third division of earth is विषय object, which comprehends the whole mass of inorganic substances. The term विषय is used here somewhat loosely. It signifies everything that at any time becomes the object of our knowledge. Organs of sense not being objects of direct perception may perhaps be excluded from the class विषय, but organic bodies, at least of all the living beings beside ourselves, do become the objects of perception and ought therefore to fall under विषय. One's own body being subjective (आध्यात्मिक) may be ranked apart, but the bodies of other persons are as much objects of knowledge as houses or stones. Why then should they not be included under विषय? The reason is that the word विषय is used here in a restricted sense. It

Object.

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* T. K. p. 3.

† Tattva-Chintâmaṇi.

means those things only which are always the object and never the subjects of knowledge. The bodies of living beings though objects of other men's knowledge are subjective so far as each individual is concerned, while inanimate things like stones not having any knowledge of their own must always remain objects and objects only. This point does not seem to have been clearly understood by commentators, although the difficulty was perceived by them. S. C. for instance remarks "यद्येतल्लक्षणं शरीरादावतिव्याप्तमिति विभाव्यते तदा शरीरेन्द्रियभिन्नत्वमेव तदनुसरम् । वस्तुतस्तु शरीरादिकमपि विषय एव । भेदेन कीर्तनं तु बालधीवैशद्याय," that is, although the three-fold division is a cross-division in as much as the usual definition of विषय (भोगोपयोगी विषयः) would also apply to bodies and organs, the latter are classed separately for the clear understanding of beginners. This explanation of S. C. is of course copied from a similar one in *Muktâvali*: शरीरेन्द्रिययोर्विषयत्वेऽपि प्रकारान्तरोपन्यासः शिष्यबुद्धिवैशद्यार्थः. * It is difficult to guess how such a cross-division tends to the easy comprehension of beginners, but probably these commentators, while noting that body and organ are expressly excluded from विषय, did not quite realize why the meaning of the word विषय was thus restricted. It is also significant that *Annambhaṭṭa* defines विषय simply as शरीरेन्द्रियभिन्नः, and thus carefully abstains from any reference to भोग or उपभोग.

9 There are two other questions with regard to the extent of the class विषय which cannot be so easily answered. The first is whether atoms are included in विषय. The definition भोगोपयोगी would of course exclude them, for atoms being अतीन्द्रिय can never be the objects of enjoyment. Besides other works expressly exclude them. *Bhâshâ-Parichchheda* for instance has:—

विषयो द्व्यणुकादिश्च ब्रह्माण्डान्त उदाहृतः ।†

On the other hand, as observed in a previous note (*Supra* p. 106) *Annambhaṭṭa* would seem to include atoms under विषय, and the fact that he gives a definition of विषय which

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* S. M. *Calc. ed.* p. 27.

† B. p. 37.

applies to atoms as well as products supports the conjecture. The second question is whether plants are to be classed with शरीर or with विषय. The question seems to have very much exercised later writers, and there is a difference of opinion. *Praśastapâda*, includes trees under विषय,† while *Viśvanâtha*, the author of *Siddhânta-Muktâvali* declares in favour of the opposite view.† *Śankara Miśra* discusses the arguments on both sides and arrives at the only reasonable conclusion, तथापि चेष्टावत्त्वमिन्द्रियवत्त्वं च नोद्भिदां स्फुटतरमतो न शरीरव्यवहारः‡ *Annambhaṭṭa* also would seem to take the same view.

SECT. XI. आपः

Water is a thing having cold touch. It is of two sorts, eternal and non-eternal. Eternal is atom, non-eternal is the product. It is again threefold, body, organ and object. Body is in the region of Varuṇa, organ is the sense of taste perceiving savour and residing on the tip of the tongue; masses are rivers, seas etc.

1. Water is defined as having cool touch. Like earth, water is divided, first into eternal and non-eternal, and then into body, organ and mass. The watery body is possessed by beings in the regions of *Varuṇa*, the organ is the organ of taste located at the tip of the tongue, and the mass comprehends rivers, oceans etc. This and the following paragraph on light closely resemble the last one treating of earth, and appear to have been inserted with an eye to symmetry. They are good examples of how a passion for analogies and symmetry in everything often leads to unwarranted and absurd conclusions. Because we see earthy bodies and earthy atoms, we are also asked to believe in watery and luminary bodies as well as *atoms* in the *Varuna* and *Âditya* regions respectively. *Kaṇâda* defines water as रूपरसस्पर्शवत्य आपो द्रवाः स्निग्धाः,§ and also affirms

Water.

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* P. B. Ben. ed. p. 23.

† S. M. *Calc. ed.* p. p. 26.

‡ V. S. Up. *Calc. ed.* p. 214.

§ V. S. II, 1, 2.

the coldness of the touch of water,* but it is singular that no trace of the subsequent classification is found in his *Sûtras.* These details in the case of water as well as of light have been supplied by commentators, whose dialectical ingenuity never fails to supply arguments for defending the grossest absurdities. The objection, for instance, that a watery body having no solidity, would be like a bubble of water, incapable of enjoyment, is met by the reply that though such a body would be mainly composed of watery particles, there would be enough of earthy atoms in it to add consistency and cohesion. This watery body is held to be only अयोनिज. Another objection that if coldness is the special attribute of water how is it felt in slabs of stones, is answered by attributing the coldness to the presence of water in the stone. The remarks made in the three preceding notes on the last section as to the propriety of the division and cross-division, apply *mutatis mutandis* to this and the following sections also. For the qualities residing in water see quotation at p. 85 *Supra.*

SECT. XII तैजस्.

Light has hot touch. It is of two sorts, eternal and non-eternal; eternal is atomic, non-eternal is product. It is again threefold, body, organ and mass; body is well-known in the Solar region, organ is the sight which perceives colour and resides in the forepart of the black pupil of the eye; mass is fourfold, earthy, heavenly, gastric and mineral. Earthy (mass) is fire and the like; heavenly is lightning etc. produced from watery fuel; gastric causes digestion of things eaten; mineral is gold and the like.

Light.

1. The only variation in this section over the last two is the sub-division of विषय into four kinds of light: 1 earthy, in the shape of common fire and the light of the glowworm; 2 celestial, in the shape of lightning which is fed by the fuel of water (आप इन्धनं यस्य तत्), as well as sun-light, moon-light and sub-marine fire; 3 gastric, which is instrumental in digesting the food eaten; and 4 mineral, such as gold and other metals. The first two kinds are undoubtedly real fires; but it will require

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* V. S. II, 2, 5.

a very strong metaphor to class the latter two among the luminary substances. The gastric juice is called fire because it consumes food like fire, and produces heat in the body. The last case of luminous metals will be discussed further on.

2. The threefold division of light and the four-fold subdivision of its third variety are taken from *Praśastapâda's* scholium, while the original *Sûtras* themselves contain no trace of them. *Śaṅkara Miśra*, the author of *Upaskâra* gives another four-fold division of light, viz. 1 having both colour and touch manifested, as sun-light ; 2 having colour manifested but touch unmanifested, as moon-light; 3 having both colour and touch slightly unmanifested, as the lustre of the eye; and 4 having colour slightly unmanifested, but touch fully manifested, as a red-hot postsherd.* This division is of course not compatible with the first, and proves that the symmetrical classification adopted by *Annambhatta* was regarded by *S'ankar Misra* as an innovation of the Scholiast not reconcilable with the original *Sûtra*. It may be remarked in passing that the organ of sight is located by *Naiyâyikas* at the top of the black ball, but modern science places it still further back on the retina, the black eye-balls being simply windows to let in external light. Another now exploded doctrine of the *Naiyâyikas* was that before an object could be perceived, the organ of sight went out of the eye, reached the object and then returned back to its place carrying with it the impression of the object; while it is now proved that the organ does not go out at all but the rays of the sun falling on the object carry its impression to the retina of the eye.

Varieties of lustre

3 *Naiyâyikas* have spent much argument to prove why gold and other metals are classed under light. The argument by which the luminosity (तैजसत्व) of gold is established is explained at length in T. D. Gold is light because it can neither be earth, nor water, nor wind. Its being any of the last five *dravyas* is of course out of question. Gold is not earth because the fluidity of melted

Gold is light.

* V. S. Up. Calc. Ed. p. 74

gold is not destroyed even by application of extreme heat, while the fluidity of earthy things such as clarified butter is generally found to vanish at certain temperature when there is no counteracting force. The fluidity of gold remains intact even in the absence of any counteracting force. Gold cannot therefore be of earthy nature. It cannot be water because its fluidity is occasional and not inherent; nor can it be wind as it has colour. Gold therefore is light, the heat and brilliancy natural to light being concealed by the obstruction of earthy colour and touch. The argument may be put in the following syllogism :—

सुवर्णं तैजसम्। असति प्रतिबन्धकेऽत्यन्तानलसंयोगे च सत्यप्यनुच्छिद्यमानद्रवत्वात्। यन्नैवं तन्नैवं, यथा घृतम्।

The fallacy or rather a number of fallacies in this reasoning can be easily deteced. In the first place, the proposition that the fluidity of every earthy substance must be destroyed by extreme heat is an arbitrary assumption based on insufficient data. Modern science proves that the solidity and fluidity are not definite qualities belonging to particular kind of substances as the *Naiyâyikas* hold; but they are simply states of matter dependent on temperature. Thirdly the device of accounting for the non-appearance of any quality by the supposition of a counteracting force is often, as here, carried rather too far. If obstructing causes can explain the disappearance of heat and brilliancy of light, why can they not explain the non-destruction of the fluidity of gold? To remove this objection the words असति प्रतिबन्धके are introduced in the हेतुवाक्य, for we often see that when there is an obstructing cause, even earthy substances, such as ghee placed in water, do not lose their fluidity. But how is it to be proved that there is no obstructing cause in the case of gold also? The difficulty of converting metals to gaseous state by the application of strongest possible heat seems to have struck the Indian thinkers early, but owing to the infancy of experimental sciences they did not wait to verify their conceptions of solidity and fluidity. They rather preferred the easier way of solving the difficulty by relegating these apparent exceptions to a different category altoge-

ther. The *Naiyâyikas* included the metals under तैजस् to which their peculiar lustre gave them affinity. The *Mîmâṁsakas* went further and reckoned the metals as a distinct *dravya*.

SECT. XIII. वायुः.

Air has touch without colour. It is of two sorts eternal and non-eternal; eternal is atomic, non-eternal is product. It is again threefold, body, organ and mass; body is in the aerial world, organ is the sense of touch, apprehending touch and spread over the whole body, mass is the cause of the shaking of trees etc.

Air circulating within the body is Prâṇa. Though one, it acquires different names such as Prâna, Apâna, etc. owing to (different) situations.

Air.

1. This section also is modelled on the three last preceding. Air is defined as colourless and possessing touch. It is of two kinds eternal and non-eternal, and again of three kinds, body in the regions of wind, organ of sense in the shape of the airy cuticle extending over the whole surface of our body, and object or mass in the form of the wind that blows and shakes trees.

Breath.

2. Another variety of air is however mentioned, called vital air or breath, which is nothing but wind moving inside our body. There is a difference of opinion as to how breath is to be classed under wind. *Praśastapâda* and the ancient school mention breath as a fourth kind of air and distinct from the body, organ, and mass; while later works on *Nyâya* generally include it under mass. It is doubtful what view *Annambhaṭṭa* takes, but from the unconnected manner in which he has tacked the definition of प्राण to the section on वायु, he seems to be undecided. While he divides वायु into three kinds only, and not into four as *Praśastapâda* has done, he does not expressly class प्राण under विषय. In the *Dîpikâ* also he carefully avoids the point, although the अवतरण "नञु प्राणस्य कुत्रान्तर्भावः" would seem to show that he

had to say something on the point. He gives however a decided opinion as to the identity of the five breaths. Although प्राण is mentioned as one of the five breaths, it can also be used as a generic name for all of them, as the remaining four are nothing more than the same प्राण called by different names, according to the different parts of body it travels over and the different functions it perfoms. There are not really five breaths but only one passing through five places and performing five functions, each at its proper place. *Praśastapâda* simply says क्रियाभेदादिभिरपानादिसंज्ञां लभते, the first word आदि including स्थान. *Annambhaṭṭa* has improved upon him by employing the word उपाधि which signifies both क्रिया and स्थान. The exact meaning of उपाधि will be discussed further on. The five breaths are differentiated by their places in an old verse:—

The five breaths

हृदि प्राणो गुदेऽपानः समानो नाभिसंस्थितः ।
उदानः कण्ठदेशस्थो व्यानः सर्वशरीरगः ॥

Prâṇa is situated in the breast, *Apâna* in the rectum, *Samâna* in the navel, *Udâna* in the throat and *Vyâna* over the whole body.

The functions and names of the five are explained thus:— मुखनासिकाभ्यां निष्क्रमणप्रवेशनात्प्राणः । मलादीनामधोनयनादपानः । आहारेषु पाकार्थं वह्नेः समुन्नयनात्समानः । ऊर्ध्वं नयनादुदानः । नाडीमुखेषु वितननाद्व्यानः । These five breaths also bear mythological names:—

उद्गारे नाग आख्यातः कूर्म उन्मीलने स्मृतः ।
कृकरः क्षुत्करो ज्ञेयो देवदत्तो विजृम्भणे ।
न जहाति मृतं चापि सर्वव्यापी धनंजयः ॥

As the whole of this peculiarly *Paurâṇic* physiology has been imported into modern *Nyâya* works it cannot be totally ignored, but it is not necessary to dwell on it here any further. It may be noted, however, as a good example how Indian systematists often imported foreign material into their systems, and reconciled it as far as possible with their fundamental doctrines.

Is air visible.

3. Air has been defined as devoid of colour, and possessing touch ; the first epithet distinguishes it from the first three and the second epithet from the last five *dravyas*. The touch in the air is again neither hot nor cool, and therefore different from the touch in light or water. Air thus occupies a somewhat middle and ambiguous position between the visible and the invisible *dravyas* ; and consequently a hot discussion has been carried on between the ancient and the modern schools of *Naiyâyikas* as to whether air is perceptible or not. The ancients held that air cannot be perceived but can only be known by inference ; and *Annambhaṭṭa* inclines to the same view. The argument, says T. D., that air is perceptible like a jar, as it possesses perceptible touch, is wrong, because manifested colour is a necessary condition precedent to perceptibility. A condition (उपाधि) is defined as साध्यव्यापकत्वे सति साधनाव्यापकः, that which is greater in extent than साध्य (the thing to be proved) but is not more extensive than the साधन or हेतु (reason). In a good syllogism the साध्य must always be greater than, or at least equal in extent to, the हेतु, e. g. the साध्य fire should always exist wherever there is smoke, the हेतु. When however the हेतु is greater in extent than the साध्य, there are necessarily found cases where the हेतु exists but the साध्य does not; and consequently an argument based on that हेतु becomes fallacious. These cases are due to an उपाधि. Now let us put the above argument in a syllogism, and the उपाधि will at once appear:—

वायुः प्रत्यक्षः
प्रत्यक्षस्पर्शाश्रयत्वात्
यो यो द्रव्यत्वे सति प्रत्यक्षस्पर्शाश्रयः स स प्रत्यक्षः यथा घटः ।
तथा चायम् ।
तस्मात्तथा ।

Here हेतु is सोपाधिक because there is an उपाधि intervening between the हेतु and the साध्य. The उपाधि is उद्भूतरूपवत्त्व (the state of having manifested colour) and is of course greater in extent than the साध्य and less than the साधन. The उपाधि is greater than the साध्य because we can say यत्र द्रव्यत्वे सति बहिरिन्द्रियजन्य-

प्रत्यक्षत्वं तत्रोद्भूतरूपवत्त्वम्, all substances visible to external senses have manifested colour. The words द्रव्य and बहिरिन्द्रिय are used in order to make it clear that we are talking of sensuous perception of substances only, and thus to exclude आत्मा and perceptible qualities like रूप. We cannot however assert यत्र यत्र प्रत्यक्षस्पर्शाश्रयत्वं तत्रोद्भूतरूपवत्त्वं, wherever there is tangibility there is manifested colour, because we know as a fact that air though प्रत्यक्षस्पर्शाश्रय does not possess उद्भूतरूप. The उपाधि is therefore साधनाव्यापक. On account of its existence the व्याप्ति or major premise becomes too extensive, and the whole argument is a fallacy. Separated from its technicalities, the above reasoning amounts to this. According to the hypothesis of the ancient *Naiyâyikas* the term प्रत्यक्षत्व has a narrower meaning and is exclusively applied to the cases of ocular perception. Hence substances and qualities that are apprehended by other senses but are not seen by the eye do not become objects of perception. In this restricted sense of प्रत्यक्ष, namely, ocular perception, it is evident that उद्भूतरूपवत्त्व must be a necessary condition and that air which has no रूप cannot be perceptible.

The modern *Naiyâyikas* who affirm the perceptibility of air, deny this *in toto*, because they deny the very hypothesis that बहिर्द्रव्यप्रत्यक्षत्व is confined to ocular perception only. Their view is explained by S. C. as being बहिर्द्रव्यप्रत्यक्षं प्रति महत्त्वविशिष्ट-विभुव्यावृत्त-विशेषगुणः महत्त्वविशिष्टोद्भूतरूपोद्भूतस्पर्शान्यतरद्वा करणम्, that is, everything is perceptible that possesses some special quality having महत्त्व but not विभुत्व, as for instance manifested colour *or* manifested touch, combined with magnitude. On this hypothesis modern *Naiyâyikas* regard air as perceptible, as it is the object of स्पार्शन as opposed to चाक्षुषप्रत्यक्ष, but atoms are not, because they have no magnitude. *Annambhaṭṭa* holds the ancient view and regards air as inferable only.

Why air is a distinct entity.

4. The inference to prove the existence of वायु is stated at length in T. D. The not-hot-not-cold touch which we feel on the blowing of the wind must reside in some substance as it is a quality, because the व्याप्ति, यो यो गुणः स स किञ्चिद्द्रव्याश्रयः is universally true. Now the touch cannot reside in earth, because all earthy matter having manifested touch has also manifested colour which is not found here. The touch cannot also reside in water or light, because it is neither hot nor cold. It cannot reside in the four all-pervading substances, ether, time, space and soul, for if it did, it ought to be found everywhere. Finally it cannot rest in mind, because mind being atomic, any quality residing in it cannot be felt. So there must be a ninth substance, different from these, where this touch may reside, and that substance we call air.

It is not necessary to criticise the above reasoning, because it is too evidently founded on a total ignorance of the nature of atmosphere as determined by modern physical science. The idea that our atmosphere is a mixture of different gases and not one uniform वायु, and that it has several distinguishing properties besides touch and other 'special qualities,' never occurred to these Indian physicists. Roughly speaking, पृथिवी, जल and वायु of the *Naiyâyikas* may be identified with the three states of matter, solid, fluid and gaseous, while तेजस् is a sort of material embodiment of the energy of heat. The Hindu physicist most probably did not know that heat and luminosity are the results of the same kind of chemical action. Luminosity or भास्वरशुक्लरूप was classed as a variety of colour, while औष्ण्य was a kind of touch.

How world is created

5. As air is the last of the four tangible *dravyas*, which are divided into eternal and non-eternal, the T. D. takes occasion to state the *Nyâya* theory of creation and destruction of material things. Motion is first produced in the atoms as a result of God's will. This motion produces conjunction of two monads giving birth to a diad. Three diads or binary atoms make one tertiary. From this last is produced the quadrate, and so on, until the great masses of earth, and water, and light, and atmosphere are formed.

6. The destruction of things takes place in the same order, that is, when God wills to destroy effects, motion is produced dividing the monads, and thereby destroying the binary. Thence follows the destruction of the tertiary, and so on, until the mass of earth becomes extinct. This is the process of creation and destruction which is unanimously accepted by all *Naiyāyikas* ; but there is a difference of opinion between the ancient and the modern schools as to the precise cause which immediately brings about the destruction of things. The old traditionists (संप्रदाय) held that with one exception the destruction of effects is immediately brought about by the destruction of their causes, the exception being the binaries which are destroyed, not by the destruction of their causes, *i. e.* the monads which are indestructible, but by the destruction of the *union* of the monads or primary atoms. In other words, the binaries are destroyed by the dissolution, and the subsequent products by the destruction, of the parts composing them. The dissolution of parts no doubt occurs in the latter cases also, but there it is itself the result of the destruction of parts. The moderns object to this multiplicity of causes on the ground that it is simpler (लाघव) to assume only one uniform cause in all cases, namely, the dissolution of the union binding the parts, than to suppose one cause for the binaries and another for other effects. In their opinion, therefore, there is only one cause for the destruction of all effects, namely the dissolution of the union which is the असमवायि कारण or non-intimate cause of the product.

Process of destruction.

7. The difference between the two views is much more radical than appears at first. According to the former view, the process of destruction always proceeds from cause to effect, *i. e.* the destruction of parts always precedes the destruction of effect. When the monads are separated, the binaries are necessarily destroyed, and the destruction of the latter as necessarily involves the destruction of the tertiaries. In this manner the final product is destroyed the last, just as it is the

last to be produced. Now this is diametrically opposed to the view held by other schools of Indian philosophers, especially the *Vedântins. Bâdarâyaṇa* in *Brahma-sûtra* II, 3, 14 expressly says that the process of destruction is just the opposite of that of creation; that is, the final product is destroyed first, then its parts, then their parts respectively, until we arrive at the ultimate causes. In other words, destruction is accomplished by the successive resolution of things into their components. This is in accordance with the rule warranted by our experience that analysis or division proceeds in a contrary way to synthesis or composition, whilst the *Naiyâyika* theory lays down that the building and the pulling down processes are accomplished exactly in the same way. This means that as we build a house from the foundation to the top, we should pull it down in the same order. This is certainly an impossibility; for, as *Śaṅkarâchârya* in his commentary on the above mentioned *Brahmasûtra* justly points out, if the destruction of effect follows that of parts, there must be an interval when the parts have vanished but the effect remains. Where could the effect reside in this interval? Not on the intermediate parts which are already extinct, nor on the ultimate atoms between which and the final effect there is no direct connection. The existence of the effect in absence of the parts is as absurd as it would be impossible to take away the foundation of a house without bringing down the roof. The theory of destruction laid down by the ancient *Naiyâyikas* is therefore opposed to reason as well as experience. But the view of the moderns is not so inconsistent with the natural order of things. Their theory that destruction of effects is produced by the dissolution of the *union* of parts is equally reconcilable with the old *Naiyâyika* doctrine and the Vedantic doctrine, according as we conceive the process of destruction to begin from the non-intimate cause of द्व्यणुक and end with that of the final product, or *vice versa*. The old *Naiyâyika* theory is positively opposed to the order of nature, while the modern is reconcilable with it.

8. The *Naiyâyikas* accept the old mythological idea of two cosmic dissolutions, an अवांतरप्रलय (intermediate dissolution) when all tangible products only are destroyed, and a महाप्रलय (universal dissolution) when all things, material and immaterial, are merged in the *primum mobile*, that is, the atoms. These periodical creations and destructions, says T. D., are proved on the authority of the *Śruti* text धाता यथापूर्वमकल्पयत्, 'the Creator made the creation *as before*, the word 'before' implying that there was a previous creation of which the present one is a copy.

The doctrine of atoms

6. This is a convenient place for an explanation of the *Naiyâyika* परमाणुवाद or Indian atomic theory, as it is essentially connected with the evolution and ultimate form of the first four substances. The *Nyâya* theory of creation and destruction as explained above presupposes the existence of atoms, while the division of earth, water, light and air, into eternal and non-eternal is founded on the same fact. T. D. therefore properly asks and answers here the question what is the proof for the existence of these atoms on which so large a part of *Nyâya* and *Vaiśeshika* doctrines seems to be based. The argument briefly put by T. D. may be explained thus: Every visible thing is composed of parts, for a thing in order to be visible must have three dimensions, length, breadth and thickness; and these dimensions necessarily presuppose smaller parts. A line has length because it is a succession of many points, while a surface has length and breadth because it is a series of lines placed side-ways. A mathematical point on the other hand having no dimension can never be perceived and is really, speaking nothing but a notion. Having established this universal and self-evident proposition that every visible thing has parts (यत्र यत्र चाक्षुषद्रव्यत्वं तत्र सावयवत्वं यथा पटे), we get the further axiom, also proved by experience, that every object having parts is divisible into any number of smaller parts. From these two axioms we

come to the conclusion that by gradually dividing and sub-dividing a thing howsoever large, we can arrive at particles as minute as we please. But the same experience which gives us the above two self-evident axioms puts a limit to our power of division, and we find that beyond a certain limit we cannot go on dividing a particle *ad infinitum*. In modern times Chemistry has increased this power of division largely but still it is not indefinite, and science is forced to assume a limit on which it bases all its calculations. This limit is the परमाणु of *Nyâya* and the atom of European scientists, the smallest of the small, and the ultimate constituent of all matter in universe. Human mind cannot think without having some purely simple notions which it combines into complex ideas, and these simple notions must have their counter parts, such as the atoms, in the external world. This is the genesis of the atomic theory, and the *Naiyâyika* argument to prove the existence of परमाणु is essentially the same, although clothed in the phraseology of their peculiar dogmas. The smallest visible particle is the mote in the sunbeam which is called त्र्यणुक, त्रसरेणु, or त्रुटि, that is, a tertiary atom. This mote being visible must have parts. Each of these parts again, called द्व्यणुक is divisible into smaller parts because it produces the large magnitude in the त्रसरेणु, just as the thread of a large piece of cloth is itself divisible. To explain this it must be noted here that in *Nyâya* theory the महत्त्व, magnitude, is a distinct species of dimension from अणुत्व, and cannot therefore be produced from it. If द्व्यणुक had no parts and were itself the ultimate particle, its अणुत्व would have been incapable of producing the महत्त्व of त्र्यणुक; while by assuming a further subdivision of द्व्यणुक into two atoms, we can account for the magnitude of त्र्यणुक by saying that it is the number of atoms composing the binaries forming a त्र्यणुक, and not their अणुत्व, that gives rise to the latter's magnitude. It is for this reason that while two atoms make one binary molecule three binaries are thought necessary to make up a tertiary. The number two only intensifies in the product the परिमाण of

each part; and thus the compound of two binaries, which are अणु, would be अणुतर *i. e.* still more minute, and not महत् as the त्र्यणुक really is. Therefore the number of binaries composing the त्र्यणुक is fixed at three to account for its magnitude, while, no such reason existing in the case of द्व्यणुक, the number of its parts *i. e.* the atoms, need not be more than two. Hence the mnemonical couplet, जालसूर्यमरीचिस्थं यत्सूक्ष्मं दृश्यते रजः । तस्य षष्ठतमो भागः परमाणुः स उच्यते ॥ The atom is the sixth part of the little mote which we see in the sunbeam coming through the window.

10. The question then arises in what respect does the अणुत्व of a binary differ from the अणुत्व of an atom. That the two are different cannot be disputed, because atoms being parts of binaries must be smaller, and also because their परिमाण has a distinct name पारिमाण्डल्य which is never applied to binaries. Now, according to the law that like produces like, the अणुत्व of a द्व्यणुक must be greater *in degree* than the पारिमाण्डल्य of a परमाणु, that is, a binary must be more minute than the atom, which is absurd. To obviate this difficulty as well as that about the महत्त्व in त्र्यणुक, the *Naiyâyikas* make an exception of atoms and binaries to the usual rule that the magnitude of the product is nothing but the magnitudes of parts intensified so many times. They assert that the magnitude of the product is produced by any one of the three causes, *viz.* the magnitude, the number, or the particular arrangement of parts. *Kaṇâda*, in the aphorism कारणबहुत्वाच्च,* by the च in which according to commentators we are to understand the two other causes कारणमहत्त्व and प्रचयविशेष, lays down this multiplicity of causes, and expressly distinguishes अणुत्व from महत्त्व in the next aphorism. While the महत्त्व of products from त्र्यणुक upwards is caused by कारणमहत्त्व as well as प्रचय, अणुत्व is caused by बहुत्व or number of parts only. But here comes the question why we should stop at the sixth part of त्रसरेणु. There seems to have been a difference of opinion as to why we must go even so far. Some are for stopping at द्व्यणुक and others at त्रुटि or त्र्यणुक

* V. S. VII, 1, 9.

even,* but no one appears to go beyond the परमाणु, except of course the *Vedântins* and the *Sânkhyas* who deny the परमाणुवाद altogether. The necessity of stopping at this limit is of course founded on the usual argument of *regressus ad infinitum*. If we have to stop somewhere it is better that we should stop at the earliest limit available; for, as T. D. puts it, 'if this परमाणु also is a product of still smaller parts, there will be अनवस्था. The same argument is often put in another way. Why is this jar distinct from or larger or smaller than that piece of cloth or that jar? The answer is that the constituent parts of this jar are different or more or less numerous than those in the other. The parts of each are again larger or smaller according as they contain more or less sub-divisions. Reasoning in this way we find that a mountain is far bigger than a mustard seed, because the number of ultimate parts, that is the atoms, is much larger in the first than in the second. These ultimate particles must be all indivisible and of equal magnitude, because so long as there are degrees of size amongst them, there will be a possibility of reducing the larger to the size of the smaller, that is there will be further division. The indivisibility of atoms necessarily implies that they are all of equal size. It is nothing but their greater or smaller number therefore that can make one thing, like the mountain *Meru*, big, and another thing, like a mustard seed, small. To calculate these numbers we must have a common unit like परमाणु. If we however do not recognize परमाणु and go on dividing *ad infinitum*, the number of parts in both things will be equal but the parts will vary in magnitude, and the question why one is larger than the other will ever remain unsolved. Thus the parts in both the *Meru* and the mustard seed being always the same in number, namely infinite, there is no reason why the one thing should differ in size from the other, and perfect equality ought to exist between the two (मेरुसर्षपयोस्तुल्यत्वप्रसङ्गः). If however, we fix upon a

* G.S. IV. 2, 17.

unit like परमाणु, we can easily account for their different magnitudes by the varying number of atoms in each. It can be easily guessed from this that the statement made above that the magnitude of a thing depends on the number (बहुत्व) or the size (महत्त्व) or the peculiar arrangement (प्रचयविशेष) of its parts was only provisional, the real cause in all cases being the number of ultimate parts, while the latter two causes were simply the variations of the first. This may perhaps account for their omission in the original aphorism of *Kaṇâda.**

11. A third but not a very convincing argument for proving the necessity of atoms may be stated in Dr. Roer's words—

"To say that the point where the end is obtained is not eternal would be to admit the production of an effect from a thing which is not in the connection of intimate relation. Therefore this point is eternal. As the continual progress from one great thing to another still greater finds its end in the assumption of the sky and other infinite substances, so there must also be ultimately a cessation of the progress from small to a smaller thing. Thus the necessity of atoms is proved."†

Atomic theory in India and Greece.

12. Such is the परमाणुवाद् which originally distinguished *Vaiseshika* philosophy from others, and which was afterwards imported into various other systems. It closely resembles the doctrine of *atoms* which found acceptance with several Greek philosophers. Leucippus considered the basis of all bodies to consist of extremely fine particles, differing in form and nature, which he supposed to be dispersed throughout space and to which the followers of Epicurus first gave the name of *atoms*. To these atoms he attributed a rectilinear motion, in consequence of which such as are homogeneous were united, whilst the lighter ones were dispersed throughout space. The universe was made of matter consisting of ultimate indivisible *atoms* which are indestructible and

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eternal. Empedocles and Anaxagoras did not exclude mind and spirit from this atom-born universe, thus partially agreeing with *Kaṇâda* who excludes spirit but includes mind and intellect in matter. Leucippus and Democritus excluded both. Epicurus added nothing to the doctrine. The परमाणुवाद् of *Kaṇâda* also materially agrees with the modern atomic theory of Dalton on which the whole science of chemistry may be said to be founded. The conception of atoms, simple as it seems when once comprehended, is one of the most subtle and shows a considerable advance of philosophical thought. The doctrine has been sharply criticized by *S'ankarâchârya* and other Vedantic writers, and their criticisms have greatly tended to diminish its popularity; but the credit of originality is none the less due to the philosopher who first discovered it.

SECT. XIV. आकाशम्.

Âkâsa or ether is that which has sound for its (special) quality. It is one, all-pervading and eternal.

Âkâśa or ether

1. This definition of ether differs from the preceding four in that the word गुण is inserted in it, when the author might have as well said शब्दवत् or शब्दसमवायि आकाशम्. What is then the propriety of the word गुण? V. V. and S. C. explain it as intended to controvert the doctrine of *Bhâṭṭa Mîmâmsakas* that sound is a substance and not a quality; but the explanation is rather far-fetched. That of N. B. and *Nîlakaṇṭha* is better, namely that the word गुण is used for विशेषगुण and implies that sound is the special quality of ether and ether alone, as distinguished from all other substances. Colour and other qualities are found in several substances, and even odour, the special quality of earth, is often associated with water and air; but sound is always confined to ether. Hence the author defined earth as simply गन्धवती while he defines ether as शब्दगुणम्. As to the *Mîmâmsâ* doctrine that sound is substance, it is already denied

by the mention of शब्द among the *gunas*. *Âkâśa* is also defined as संयोगाजन्यजन्यविशेषगुणसमानाधिकरणविशेषाधिकरणम्* *i. e.* ether is the seat of that particularity (विशेष) which coexists with a special quality (sound) that is created but not produced from conjunction. Ether being eternal and all-pervading has a विशेष of its own, but this विशेष is distinguished from that of soul, as it is accompanied by a *created* special quality *i. e.* sound, and hence the qualification जन्यविशेषगुण etc. But then the *particularities* in atoms are also accompanied by *created* qualities and hence they have to be excluded by the further epithet संयोगाजन्य, the special qualities in atoms such as पाकजरूप being often अग्निसंयोगजन्य. This elaborate definition therefore ultimately amounts to the same as शब्दगुण. *Ether* is the best available though not quite accurate English equivalent for *Âkâśa* because it resembles the latter in being an all-pervading and imponderable substance. Ether however carries light and heat only, and not sound, which function is assigned by modern science to the atmosphere. Ether therefore resembles *Âkâśa* in all respects, except its special quality of producing sound. Both ether and *Âkâśa* are substances proved by inference, that is, their existence is presumed in order to account for certain natural phenomena, such as the diffusion of light and sound which are otherwise inexplicable.

Why sound is the attribute of Âkâśa.

2. *Kaṇâda*† concludes sound to be the sign (लिङ्ग) of *Âkâśa* by process of exhaustion, because no other substance is capable of having sound as its quality. The question in what respects *Âkâśa* differs from *Dik* will be discussed under *Dik*. The fact seems to be that the names of the five elements including *Âkâśa* came down to the *Naiyâyikas* from a very ancient source, and that they had no choice but to recognize them if they wanted to preserve their orthodoxy. They only assigned to each such place and functions as harmonized with their own physical theory of the universe. Our author mentions three characteristics of *Âkâśa*, that it is one, all-pervading, and eternal. The

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* *Sarv. D. S. Calc ed. p.* 104.

† V. S. II, 1, 27.

epithet *one* implies that the mention of numerous *Âkâśas* such as घटाकाश and मठाकाश in common parlance is due to उपाधि and cannot be real. Being one and emitting sound everywhere, ether is necessarily all-pervading; and being all-pervading it must be eternal also. Being विभु *Âkâśa* is अतीन्द्रिय, imperceptible, and therefore known only by inference. The syllogism may be put thus: शब्दः पृथिव्याद्यष्टद्रव्यातिरिक्तद्रव्याश्रितः । अष्टद्रव्यानाश्रितत्वे सति समवायिकारणवत्त्वात् । यन्नैवं तन्नैवं, यथा रूपम्.

Vibhutva

3. T. D. defines विभुत्व, all-pervasion, as सर्वमूर्तद्रव्यसंयोगित्वम्, contact with all corporeal objects. Corporeality (मूर्तत्व) again is defined as परिच्छिन्नपरिमाणवत्त्वम्, the quality of having definite dimensions. मूर्तत्व is defined by N. B. as क्रियावद्द्रव्यत्वम्. Corporeal substances are thus either those that have definite dimensions or that have motion. The second definition practically amounts to the same as the first, because action or motion implies movement of either the parts or the whole from one place to another, and that is not possible unless the substance is limited in space The corporeal substances are five: earth, water, light, air, and mind. They and their common properties are enumerated as follows:—

क्षितिर्जलं तथा तेजः पवनो मन एव च ।
परापरत्वमूर्तत्वक्रियावेगाश्रया अमी ॥ *

These however do not constitute a separate class, as they come under *Udayana's* exception, cross-division.† The class of five मूर्त *dravyas* crosses with that of five भूत *dravyas*, the first four being common to both, but मनस् of the one class being replaced by आकाश in the other. The distinction between मूर्त and भूत is simple. मूर्त *dravyas* are coporeal substances that are limited in space and have definite dimensions; while the भूत *dravyas* are not necessarily so. They are simply elemental substances which singly or by combination among themselves become the material causes of all the products in the world.

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* B. P. 24.

† Vide note *supra*. p. 92.

मनस् though atomic does not produce anything else and is not therefore भूत, while आकाश though all-pervading produces sound. The other four substances are of course both भूत and मूर्त. मूर्तत्व is opposed to विभुत्व (all-pervasion), भूतत्व to कार्यरहितत्व or अविकारित्व (invariability). Soul is only a substratum of knowledge and not being its material cause cannot be either भूत or मूर्त.

SECT. XV. कालः.

Time is the (special and instrumental) cause of the use of (words) past etc. It is one and all-pervading.

1. *Annambhatta's* definition of time is very simple and is best for all practical purposes, although it labours under the fault of being merely a verbal one. This and the succeeding definitions based on व्यवहार are convenient descriptions of the things and are sufficient for their identification, but they do not convey the full connotation of the terms. व्यवहार is defined by V. V. as वाक्यप्रयोगरूपः *i. e.* statements such as past time and future time. The word हेतु here, as well as in the following definitions where it is applied to व्यवहार, is to be understood in the restricted sense of असाधारणनिमित्तकारण, special and instrumental cause. Time is the instrumental cause of व्यवहार, as distinguished from *Âkâśa* which is its material cause. व्यवहार of course is nothing more than words or sound. Similarly time is the special cause of व्यवहार alone, as distinguished on the one hand from all other effects of which time is only the general cause (साधारणकारण), and on the other, from space and other things which are enumerated as साधारणकारणानि along with time, and which are therefore the general causes of all effects including व्यवहार. Thus the word हेतु, when taken in the above restricted sense, frees the definition of time from three faults, viz. an अतिव्याप्ति on ether, a second अतिव्याप्ति on space and other general causes, and an unnecessary restriction (अव्याप्ति) in calling time the cause of one thing only when it is really the cause of all effects. The definition in the text, being based on common usage of certain words, teaches us nothing new about the thing itself. The utmost

Time (margin)

that it tells us is that time is some unknown entity which is necessary to explain why we call certain occurrances as past, others as present and others as future. The fact of there being a common usage of those terms is proved by our daily experience, and the *Naiyâyika*, finding no better way of explaining it, assumes an independent substance, which is its source but about the real character of which he is as much in the dark as those who deny the substance altogether.

2. Another and apparently more accurate definition of time is that given by *Viśvanâtha* :—

जन्यानां जनकः कालो जगतामाश्रयो मतः ।
परापरात्वधीहेतुः क्षणादिः स्यादुपाधितः ॥*

This is compressed into परापरव्यतिकर-यौगपद्यायौगपद्य-चिरक्षिप्र-प्रत्ययकारणं द्रव्यं कालः । that is, time is the substance which is the (instrumental) cause of our cognitions of priority or posteriority, simultaneity or otherwise, slowness or quickness.† The only material difference between this and *Annambhaṭṭa's* definition is that the latter's व्यवहार (common usage) is substituted by प्रत्यय (cognition). According to *Annambhaṭṭa* time is the cause of व्यवहार, that is a certain kind of speech or language; while according to *Viśvanâtha* and others it is the cause of certain kind of cognitions or mental notions. Now as language and thought are identical, or rather as language is but the outward expression of thoughts, both definitions practically amount to the same thing. There can be no outward expression unless there are mental notions previously, while according to many no thinking is possible without the aid of language. Anything therefore which is an essential element of the one must be so of the other also. *Annambhaṭṭa* stops short at language and is therefore safe; *Viśvanâtha*, in going a step further to thought, treads on debatable ground; for one may, while accepting the instrumentality of time to व्यवहार as a broad and indubitable fact, deny that an independent entity like time is

* B. P. 44-5.

† Śaṅkara Miśra on V. S. VII, 1, 25.

the cause of our particular cognitions. For aught we know, the cognitions may be due to other causes, and when produced they constitute a separate class the common property of which we denote by the word time. It is therefore obvious that *Annambhaṭṭa* was wise in purposely making his definition simple and somewhat vague.

3. The question what is time essentially, apart from its being the cause of any व्यवहार or धी, remains to be answered; and it has remained unanswered till now in spite of the various speculations of Indian and European philosophers. Among the Indians, *Sânkhyas* denied the existence of an independent entity like time, including it under *âkâśa*, while some modern *Naiyâyikas* identify time and space with God. Time being an incorporeal and imperceptible substance is only inferrible. The argument may be stated thus: परत्वापरत्वे सासमवायिकारणके । भावकार्यत्वाद्घटवत्. It must be remembered that time being संयोगरूप is the असमवायिकारण of the qualities परत्व and अपरत्व, which have the substances in which they reside for their material causes. The संयोग with which time is here identified is the contact of रविक्रिया or तपनपरिस्पन्द (motions of the sun) with material objects like घट. These motions of the sun constitute the *Upâdhis* that mark the divisions of time such as moments, days and months.

Time is eternal and all-pervading.

4. Time is regarded as one, all-pervading and eternal entity like *Âkâśa*, its particular divisions like those of *Âkâśa*, being due to *Upâdhi* and therefore unreal. Here *Annambhatta* probably means to deny the doctrine of a section of *Naiyâyikas* who assign reality to moments only, and regard time in general as merely a collection of such moments. It is clear from the above that the *Naiyâyikas* did not apply the test of a searching analysis to the conception of time, just as Kant for instance has done in modern times. In his *Critique of Pure Reason*, Kant arrives at the conclusion that the conception of time as well as those of space and causality are ultimate facts lying at the basis of all experience and

are derived from intuition only. We cannot account for it by any theory founded on experience, because experience itself is possible only when we have first the idea of time. It seems the *Naiyâyikas* had a faint notion of this fact, which they roughly expressed by saying that time is the cause of speech (व्यवहार) or thought (धी).

SECT. XVI. दिक्.

Space is the (special and instrumental) cause of the employment of words East, etc. It is one, all-pervading and eternal.

1. The definition of space in the text is modelled on that of time. *Viśvanâtha* gives a more comprehensive and accurate definition, दूरान्तिकादिधीहेतुः the cause of (our) notions of far and near. * Another definition of space given in *Sarv. D. S.* is more technical, अकालत्वे सत्यविशेषगुणा महती, † 'space is that which not being time is extensive and is devoid of any special quality'. Space, like time, is one all-pervading and eternal, while its varieties which are counted four or ten or any larger number, are due to *Upâdhi*. The conception of space very nearly corresponds to that of time, although the two things can be sufficiently distinguished to make them separate entities. The remarks as to time in the preceding notes apply *mutatis mutandis* to space also. The difference between time and space is slight but clear. Time is the cause of कालिकपरत्व, space of दैशिकपरत्व. The उपाधि which diversifies time is production, or in fact, any kind of action, while the उपाधि in the case of space is contact with corporeal objects, जन्यमात्रं क्रियामात्रं वा कालोपाधिः । मूर्तमात्रं दिगुपाधिः (S. C.). This means that the divisions of time are determined by production and destruction of things, while those of space by the greater or smaller number of visible objects that intervene between two spots.

Space.

2. Another distinction between time and space is :—

नियतोपाध्युन्नायकः कालः । अनियतोपाध्युन्नायिका दिक्. †

* B. P. 46.

† Sarv. D. S Calc. ed. p. 104.

‡ V. S. Up. Calc. ed. p. 115.

The relations of time are constant, for when a moment of time is said to be present or future with reference to any object or event, it is always so; while the relations of space are often varying, that is, the spot of ground, which may be eastward of one thing at one time, might be westward of the same thing at another or of a different thing at the same time. This means that the divisions of time are fixed and settled, while those of space are relative only. This is not however quite correct, for the relations of time are in fact as varying as those of space. The same object or event which is past in reference to one moment may be future or present with reference to another. The only positive assertion that we can make about the two conceptions is that they are complementary to each other and cannot vary at the same moment; that is, we can speak of different times only with reference to a particular spot, and of different spaces with reference to a specific moment of time. Like time, space is inferrible only, the inference being expressed in the form: देशिकपरत्वापरत्वे सासमवायिकारणके। भावकार्यत्वाद्घटवत्.

Âkaśa and Dik

3. It may be asked in what respect does *Dik* differ from *Âkâśa* and why the two are separately recognized. Of course as treated in the *Nyâya* system the difference between the two is too patent. *Âkâśa* is a भूतद्रव्य, *Dik* not; *Âkâśa* is the material cause of sound and has a special quality; *Dik* does not produce sound and has no special quality; *Dik* resembles time in being the general cause of all effects, while *Âkâśa*, like earth and other material substances, produces one kind of effect only, namely, sound. *Âkâśa* belongs to the region of matter, *Dik* to the province of mind; *Âkâśa* has an objective existence, *Dik* is known by subjective experience only. In this way the two can be easily differentiated, but the question goes deeper. The objector will admit that ether and space, as conceived by the *Naiyâyikas* may be different entities, but he may still ask, why they are conceived so different at all. In what respect do they differ essentially; and if one is dropped, cannot its functions

be assigned to the other? It is not easy to answer the question in this form, because the conceptions of ether and space are extremely vague and general. It appears however that the *Naiyâyikas* recognized the two entities, because they could not reconcile the notion of a material cause of sound with that of a general cause of all effects. A thing which produces a positive material quality like sound must be material; but then it cannot be the instrumental cause of mere relations like परत्व and अपरत्व, which constantly vary and have, so to say, only a mental existence. Besides it is possible that *Âkâsa* had already taken its place in the popular mind as one of the five elements before the time of *Naiyâyikas*, and they had therefore no choice but to incorporate it into their system, while they invented a new substance called *Dik* to account for ideas and notions, that could not be attributed to *Âkâśa* as it was then conceived. Whatever may be the case, the distinction between the two as defined in the *Nyâya* system is perfectly clear.

SECT. XVII. आत्मा.

The Soul is the Substratum of Knowlege. He is two-fold, Human and Supreme. Of these the Supreme Soul is the All-powerful, Omniscient God, devoid of pleasure and pain. The Human Soul is different in each body and is all-pervading and eternal.

Soul.

1. The eighth substance is Soul, which is defined as 'the substratum of knowledge.' The word अधिकरण here implies that the knowledge resides in the soul by intimate relation (समवाय); otherwise the definition might overlap time and space, which are the receptacles of all things (सर्वाधार) by कालिक and देशिक relations respectively. This soul is of two kinds, Supreme and Human, of whom (तत्र) the Supreme Soul, namely God, is One and Omniscient, while the human Soul is all-pervading, eternal, and different in each body. The soul being अमूर्त is inferrible only, the argument being that the existence of organs of sense and their appropriate objects implies a distinct knower who can use them. करणव्यापारः सकर्तृकः । करणव्यापारत्वात् । छिदिक्रियायां वास्यादिव्यापारवत् । The activity of organs must have an agent to account for it, for every instrument requires an agent to handle it, as for instance, an axe in cutting. *Kaṇâda's* aphorism

likewise runs इन्द्रियार्थप्रसिद्धिरिन्द्रियार्थेभ्योऽर्थान्तरस्य हेतुः* The followers of *Gotama* however confine this inference to the Supreme Soul only, holding the human soul to be capable of being perceived. Another argument to prove the existence of soul is बुद्ध्यादयः पृथिव्याद्यष्टद्रव्यातिरिक्तद्रव्याश्रिताः । पृथिव्याद्यष्टद्रव्यानाश्रितत्वे सति गुणत्वात् । यन्नैवं तन्नैवं, यथा रूपादि । The soul has to be inferred because a substratum is wanted for the qualities बुद्धि सुख दुःख इच्छा द्वेष प्रयत्न धर्म and अधर्म, which cannot reside in any one of the eight inanimate substances, earth etc.

2. As souls are innumerable it may be said that they constitute a class and have a common property आत्मत्व, residing in all of them. आत्मा therefore may be defined as आत्मत्वसामान्यवान्† or अमूर्तसमवेतद्रव्यत्वापरजातिः‡. According to the latter definition, soul is a species of substance having a common property that is intimately connected with an incorporeal thing. As there are four incorporeal substances, ether, time, space and soul, of which the first three being single do not form a class, आत्मत्व will be the only sub-class of द्रव्यत्व that is intimately connected with an incorporeal thing. To this definition however some might object on the ground that as Supreme and human souls are dissimilar in every respect, they cannot be huddled together in one class, and there cannot therefore be any common जाति as आत्मत्व; at least such a जाति will not reside in ईश्वर. The answer to this objection is that possession of knowledge is a property common to both kinds of souls, whatever be their other differences, and it is sufficient to make आत्मत्व a जाति covering both the Supreme and the human souls. This is implied in such general Vaidic texts as आत्मा वाऽरे द्रष्टव्यः. § The argument is characteristic and very important too. It is characteristic because it shows how a single common property often suffices the *Naiyâyikas* to form a class notwithstanding that the individuals might disagree in all other respects. The argument also explains the

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* V. S. III, 1, 2.
† T. K. p. 3.
‡ Sarv. D. S. Calc. ed. p. 104.
§ S. M. Calc. ed. p. 37.

anomaly of including such too quite distinct and dissimilar things as Supreme and human souls under one category. No two conceptions can be more opposed to each other than those of God and the human soul. One is Omniscient and One, the other is ignorant and numerous. One is the Creator and Master of the universe, the other is the slave and the plaything of fate. One is entirely free from pleasure and pain, the other is subject to all transient passions. Almost every attribute, that can be predicated of one is necessarily denied of the other. And yet the *Naiyâyikas* have grouped both of them together, because they have the single common characteristic of possession of knowledge. This knowledge again is different in both, being eternal in the Supreme, and evanescent in the human souls, but that does not necessarily make the two souls totally dissimilar. This seems to be the reason why *Annambhatta* has given ज्ञानाधिकरणत्व as a general definition of आत्मा in preference to others that are debatable. The word चैतन्य (life) also seems to be purposely avoided in defining आत्मा, because in the wider sense of the term even plants have चैतन्य, but they fall under विषय as they have no आत्मा according to a section of the *Naiyâyikas*. चैतन्य can be identified with आत्मा in its narrower sense only, namely, conscious life.

Are the Vais'eshikas atheists.

3. The method of grouping God and man together as subdivisons of one category as well as the argument with which it is defended appear somewhat arbitrary and have led some writers to suspect that the आत्मा in the original aphorisms of *Kanâda* meant जीवात्मा only, and the inclusion of God or परमात्मा under the same category was due to commentatorial ingenuity. It is said that all the descriptions and arguments to prove the existence of soul evidently apply to जीवात्मा, while there is no clear and specific mention of God in the aphorisms of either *Kanâda* or *Gotama*. * Some have argued from this circumstance that both the *Nyâya* and the *Vaiśeshika* systems were at first atheistic.

* Bânnerjea's *Dialogues on Hindu Philosophy* p. 147 *et. seq.*

Without however going so far we might assume that the guess is not very wide of the mark and that *Kaṇâda* and *Gotama* might have at first purposely excluded God from their systems, not as being totally non-existent, but as being beyond and above the phenomenal world with which their systems were chiefly concerned. Possibly the aphorists confined themselves to a classification and discussion of sublunary things only without minding the supernatural agency, while commentators considering this as a defect, supplied the omission by inserting God under the only category where it was possible to do so. Thus for instance, while *Praśastapâda* says nothing about God, his commentator *Śrîdhara* classes God along with the human soul, although the former has six and the latter fourteen qualities.* Whatever be the truth, the *Naiyâyikas* do not attach much importance to the inclusion of God under आत्मन् and always speak of him as an independent entity whenever occasion requires. When they speak of soul, they generally mean जीवात्मा only. This is another illustration how a love of symmetry and completeness which characterises Indian systematists often overrides their philosophical accuracy. The student should also note the fact that soul is here mentioned as one of the substances, along with earth, water etc. Nothing can show better the materialistic tendency of *Nyâya* philosophy than this inclusion of spirit under the same category as dead matter.

Existence of God.

4. The T. D. supplies a deficiency in the text as it were by stating in full the celebrated *Naiyâyika* argument to prove the existence of God. The argument is a reply to an atheist, like *Châṛvâka* or *Bauddha*, who absolutely denies the existence of God because there is no positive proof of it. God, say the atheists, cannot be perceived, because, being a colourless substance, He is not the object of external senses; nor can He be perceived mentally, as He is far removed from pain and pleasure felt by the soul. God cannot also be inferred as no similar instance can be given to

* P. B. Ben. ed, p. 10.

support the inference. As to आगम or testimony it is useless, first because it is not universally accepted as a valid proof, and secondly because the *Vedas* themselves depend for their authority on God and cannot therefore prove His existence. Our author denies this and declares the existence of God provable by inference based on the universally accepted principle of causality. The argument is

क्षित्यंकुरादिकं कर्तृजन्यं । कार्यत्वात् । यद्यत्कार्यं तत्कर्तृजन्यं यथा घटः ।

Every effect must have an agent;

The universe is an effect;

∴ It must have an agent.

This agent is called God. It should be noted that this argument is founded on several assumptions; *viz.* 1 that the relation of causality is universal, *i. e.* every effect must have a cause; 2 that every product must have a sentient and intelligent producer; 3 that this world is such a product; and 4 that its producer must be such an extraordinary Being as God. The first, says the *Naiyâyika*, is a self-evident axiom, known to us intuitively as it were, and corroborated by experience. The second is proved by daily observation, because we see that a jar is made by a potter and a piece of cloth is woven by a weaver, without whom they could not have been produced. Creation results from some kind of motion in the atoms, and motion requires previous effort or volition. This last being the quality of sentient soul only, it follows that no creation is possible unless there is a sentient being pre-existing to set the particles of matter in motion. The third assumption, that this world is a product is also based on observation. Plants and animals are products because we see their birth, growth and death. These occurrances cannot be spontaneous, and there must be some hidden agency to prompt them. Besides they happen with such a remarkable regularity that one is forced to think that the agency directing them must be an intelligent one, and not simply *Adrishta*, fate or

destiny, which is assumed to be a universal cause of all creation. The last premise necessarily follows from the preceding ones, because a Creator of this multifarious universe must be Omniscient and Omnipotent, and in fact must possess all attributes usually ascribed to God; otherwise he will be either incapable of creating or be himself liable to creation and destruction. This reasoning is of course powerless against an opponent who denies any one of the above premises or the validity of the common experience on which they are founded.

5. T. D. defines कर्तृत्व as उपादानगोचरापरोक्षज्ञानचिकीर्षाकृतिमत्त्वम् *i. e.* the agent is one who possesses (three things) an intimate cognizance of the material cause, a will to act, and an effort. The three attributes ज्ञान, इच्छा and कृति are closely related to one another as cause and effect. There cannot be an effort (कृति) unless there is a will, and a will to produce can only arise when there is previously direct cognition of the material cause on which the will is to operate. अपरोक्षज्ञान is required because mere knowledge of an absent (परोक्ष) material cause, such as earth in a pit or cotton on the tree, will not suffice. The material must be at hand and under the agent's control at the time of creation. It is suggested by some and with great plausibility, that the definition of कर्तृत्व may be confined to कृतिमत्त्वम् simply, as कृति being the final stage necessarily presupposes the other two ज्ञान and इच्छा. It follows that the Creator of the universe must have direct knowledge of the atoms of all substances, must have a will to create, and also power to bring about such a creation. He must therefore be Omniscient and Omnipotent.

6. The weakness of the argument to prove a Creator lies in the third and the fourth of the aforesaid four assumptions which are not accepted by many. How do we know for instance that this universe is a product? Individual things in the world may be products in our common acceptation of the term, but that does not necessarily prove that the whole is a product too. The whole does not always share the nature of the parts, as for instance in a windmill although each particle moves, the whole is stationary. Secondly, our human experience being limited

we cannot positively say that everything in this world is a product and that there is nothing which is not produced. Thirdly, *Naiyâyikas* themselves accept several eternal things such as atoms, ether, time, space, souls and minds. If these are eternal, they cannot be products and can have no Creator. If they are excepted, the Creator of the remainder cannot be omniscient and omnipotent. Anyhow the *Nyâya* theory of God is inconsistent with their other doctrines. Fourthly, since every intelligent agent must have a will, God also must have desire and the consequent feelings of pleasure and pain. He cannot therefore be much better than frail mortals. Lastly, to call this world a product or effect is begging the whole question; for cause and effect being merely correlative terms, a thing cannot be called effect unless and until its cause is proved. The universe therefore cannot be called a product unless you first independently prove the existence of its Creator. Such are some of the objections advanced by the *Vedântins* and other monistic philosophers against the teleological argument of the *Naiyâyikas*. The controversy as to an independent Creator of the Universe ultimately resolves itself into the distinction between dualism and monism.

7. The student will do well to master the full armoury of *Nyâya* arguments by which the existence of a personal God outside the universe is proved. These arguments or proofs are summed up by *Udayanâchârya* in the following verse:—

कार्यायोजनधृत्यादेः पदात् प्रत्ययतः श्रुतः ।
वाक्यात् सङ्ख्याविशेषाच्च साध्यो विश्वविदव्ययः ॥*

"From effects, combination, support etc., from traditional arts, from authoritativeness, from S'ruti, from sentences thereof, and from particular numbers—an everlasting Omniscient Being is to be established."†

The first of these eight or nine arguments to prove the existence of God is the same as the one discussed above, viz. that a Creator is necessary to account for this phenomenal world. The second आयोजन or 'combination' is explained as the action which produced the union of two atoms forming the binary compound at the beginning of creation,

* *Kus.* V. 1. † *Ibid.* Cowell's Trans, *Bib. In.* p. 64.

and which being action, required an intelligent actor. The third proof, 'support' means that the world depends upon some being who prevents it from falling. The etc. (आदि) includes destruction of the world and presupposes a destroyer. *Pada* here means पटादिसम्प्रदायव्यवहार, that is, traditional arts of weaving cloth etc. which could have been invented at first only by some intelligent being. 'Authoritativeness' is a certain virtue inherent in the *Vedas* whereby they produce right knowledge in us, and therefore implying a Being who imparted that virtue. The proof of *Śruti* establishes a Being who made the *Vedas* what they are. Again the *Vedas* consisting of sentences must have been produced by some author just as *Mahâbhârata* and other books. The last proof, 'number,' requires a little explanation. It is held that the magnitude of a binary is produced not from the infinitisimality (पारिमाण्डल्य) of atoms but from the number (two) of the atoms composing the binary;* and it is also a *Nyâya* doctrine that the conceptions of duality and subsequent numbers are produced in things by an effort of the mind. The duality therefore which produced binaries at the beginning of creation must have been first conceived by some intelligent being existing before creation. Number is thus a proof of the existence of God. *Udayanâchârya* also establishes God's existence in another way, namely, first by proving *Adṛishta* or destiny, and then arguing that the inanimate destiny must have some intelligent Being to regulate it.† Many of these arguments of *Nyâya* writers are identical with those given by Aristotle and widely used in modern times by Paley and the Christian divines. The idea of God or a Supreme and Omniscient Creator of the world, which was at first rather faint in the Sûtras, came to occupy an important place in the *Nyâya* system as developed in later times.

God's attributes.

8. *Nyâya* writers, while unanimous on the point of God's existence, do not agree as to his attributes. Some hold that God can make creation although He has no body owing to absence of any *Adṛishta* in his case; others say that God may be

* See note p. 123 *Supra*, and P. B. Ben. ed. p. 131. † *Kus.* I, 4.

sometimes endowed with a body (as in the various incarnations) by our *Adrishta*, just as a woman gets a body according to the *Adṛishta* of her husband. A third school calls the atoms the body of God ; and a fourth assigns that honour to ether. A fifth section conceives God to be formed of two bodies, the Creator and the thing to be created, at the beginning of creation ; while a sixth one reaches the climax by giving a body to God in the same way as a devil gets one for itself by possessing some human medium. All these speculations are due to attempts to overcome the difficulty how a Creator could create without having a physical body as well as organs of sense and action. The *Nyâya* enumerates eight special qualities of God, namely, number, (the greatest) dimension, severalty, disjunction, intellect, desire and effort. The Supreme Soul differs from the human in not having pain, merit and demerit ; but there is a controversy as to whether He has pleasure. The modern *Naiyâyikas* hold on the authority of texts, such as नित्यं विज्ञानमानन्दं ब्रह्म, that God enjoys eternal happiness just as He has eternal knowledge, while the ancients interprete the word आनन्द as meaning simply दुःखाभाव, and deny any positive pleasure or pain to God. *Annambhaṭṭa* as usual appears to prefer the ancient view; and hence probably the epithet सुखदुःखादिरहित which is found interpolated in some Mss. of T. S.

9. Having proved the existence of God, T. D. defines the human soul as सुखाद्याश्रयः thereby excluding God who is devoid of pleasure or pain. जीव is also described variously as इन्द्रियाधिष्ठाता, or बन्धमोक्षयोग्य or जन्यज्ञानवान्, all which epithets are merely contradictories of the attributes of God. The human soul can be easily proved to be distinct from body or organs, and also to be numerous, eternal and all-pervading. The *Chârvâkas* say that our body itself is the soul, because our self-consciousness ‘ I am a man ’ ‘I am a Brahman,’ relates to the body ; but it is not so, because the self remains the same although the body changes as it grows from infancy to old age. Besides we have the opposite consciousness ‘ my

Human Soul.

body, ' ' my head ' etc. and we feel no diminution of self even if parts of body such as arms or legs be cut off. Others maintain that the soul is identical with organs of sense as is proved by our consciousness ' I am blind ' ' I am deaf '; but this is also not true, for the deprivation of any one or all the organs does not injure the soul. Again if the organs are soul, there would be as many different souls in a body as there are organs of sense, and besides, says T. D., we shall not have, as we have now, the identity of consciousness that the same person, *i. e.* I, who saw the jar at a former time, touch it now. Nor is mind the soul, as mind being atomic would be incapable of simultaneously apprehending many objects. The soul is therefore something different from all these. The human souls are conceived to be numerous, and not one as the *Vedântins* hold, in order to account for the variety of experiences of pleasure, pain etc. in different bodies. The same soul however passes through several bodies; otherwise we cannot form certain impressions and habits (such as the sucking of a new-born child) that seem to come to us intuitively as it were, and are really derived from our experience in previous births. Plurality of souls is thus reconciled with the doctrine of transmigration. It follows from this that the human soul is eternal, for otherwise he cannot pass through several births without losing his identity. He must also be all-pervading, for he can neither be atomic nor of any intermediate magnitude. If atomic he can occupy only a minute spot in the body and thus cannot simultaneously feel pleasure or pain at distant parts of the body. If the soul has an intermediate magnitude he will be liable to destruction by the enlargement or diminution of that magnitude. Again, how is this middling magnitude to be determined ? It will be either the same size as the body, as the *Jainas* hold, or it will be different, being larger or smaller. In the latter case the soul would be too large or too small to exactly occupy the body as he should. In the former case the difficulty arises as to how a soul which was small in the small body of a child could increase when the child grows to manhood; and similarly how the same soul which in one birth was of the size of an

elephant could in another birth be accommodated in the body of an ant. If it is said that the size varies, then it is not the same soul, and there will be different souls not only in different births but even at different stages of life. Hence the soul must necessarily be regarded as all-pervading. To this last supposition an objection may be made that each all-pervading soul would occupy all bodies and thus the experiences of all beings would be cognized by every individual. The answer to this objection is that the soul though all-pervading cognises nothing by himself, but by contact with a mind which is separate and confined to each body.

How do we know soul

6. There is one point with respect to जीव which being controversial seems to have been purposely omitted by T. D., namely whether जीव is perceived or is only to be inferred like ether and other incorporeal substances. The followers of *Gotama* hold that जीव is perceptible by the mind because it is the object of such mental cognitions as 'I am happy' or 'I am unhappy.' The *Vaiśeshikas* maintain that जीव is not perceptible even mentally, because the cognition 'I am happy' refers not to the pure Ego, but to the quality of pleasure or pain which thus becomes the sign of the existence of जीव. A still greater objection to the perceptibility of soul is that he being the perceiver of everything cannot perceive himself, the knower and the known being always different. जीव is therefore only inferrible, the inference being सुखादिसाक्षात्कारो द्रव्याश्रितः। गुणत्वाद्रूपवत्. जीव may also be inferred from the existence of organs of sense, or of qualities such as बुद्धि which can reside in soul alone. Several of these so-called 'signs' of soul are enumerated in *Kanâda's* aphorism—प्राणापान-निमेषोन्मेष-जीवन-मनोगतीन्द्रियान्तरविकाराः सुखदुःखेच्छाद्वेषप्रयत्नाश्चात्मनो लिङ्गानि. * *Annambhatta* seems to favour the *Vaiśeshika* view of the inferrible character of soul, though he does not explicitly say so. The human soul has 14 special properties, for which see quotation, p. 85-6 *Supra*.

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* V. S. III, 2, 4.

SECT. XVIII. मनः

Mind.

Mind is the organ which is the instrument of the cognition of pleasure etc. Being assigned to each soul, it is countless atomic, and eternal.

1. Etymologically mind is not simply the instrument of thought, (मन्यतेऽनेन), but in reality its functions are much more extensive, because it is not only the direct cause of internal experience, such as that of pleasure and pain, but is also an aid in the perceptions of external senses. The *Naiyâyikas*, strangely enough, give much prominence to the latter two functions of the mind, and entirely subordinate, if not actually deny, its character as the instrument of thinking. Even taking these two functions assigned to mind, it has a double character. It is both an organ of sense itself, and an accessory to other organs. *Annambhaṭṭa's* definition, being founded on the former of these two functions, distinguishes mind from other organs which give knowledge of external objects only, while mind brings about internal cognition of such things as lie beyond the province of the other organs. Hence the word उपलब्धि is purposely used here in the restricted sense of direct internal cognition; while साधन means an instrumental cause. By सुखादि, V. V. remarks, are to be understood all qualities that reside in the soul by intimate relation, and which could therefore be perceived by mind alone. The word इन्द्रिय is purposely inserted in the definition to exclude soul as well as the conjunction of mind with soul, both of which are instrumental in bringing about the cognition. If we however take the word साधन in the strict sense of a करण, the word इन्द्रिय seems to be unnecessary and may be dispensed with ; for आत्मा will be excluded as being the agent and not the करण proper of a cognition, while आत्ममनःसंयोग being व्यापार is distinct from the करण. Perhaps the word इन्द्रिय is introduced to contradict those theorists who refuse to call mind an organ ; but of this later on.

T. D. gives another definition, स्पर्शरहितत्वे सति क्रियावत्त्वम् which, though technically correct enough, does not give us much insight into the nature of the thing defined. Of the

five intangible substances, ether, time, space, soul and mind, the last alone, having a limited dimension, can act, while the first four being all-pervading can never have any motion. Mind being thus intangible and corporeal is only inferrible, the inference being, as usual in such cases, drawn from the functions assigned to it. The mode of reasoning is to assume a certain cause to account for such effects or phenomena as are known to be undoubted facts and cannot be explained in any other way. The argument for mind is,— सुखादिसाक्षात्कारः करणसाध्यः । जन्यसाक्षात्कारत्वाच्चाक्षुषसाक्षात्कारवत्.* *Kaṇâda* and *Gotama* give two different proofs of mind which are if possible even more convincing than the above. *Kaṇâda's* aphorism आत्मेन्द्रियार्थसंनिकर्षे ज्ञानस्य भावोऽभावश्च मनसो लिङ्गम् † gives as a proof for mind the fact that knowledge is produced or not according as there exists or not the conjunction of mind with soul, organs and objects. *Gotama* lays stress on the fact that our cognitions are always successive and never simultaneous युगपज्ज्ञानानुत्पत्तिर्मनसो लिङ्गम्.‡ There can be only one conjunction at a time, and therefore a succession of cognitions such as we daily experience can be possible only with an intermediate link like the atomic mind.

2. The minds are as innumerable as there are human souls, one being assigned to each of the latter. The word नियत is interpreted by V. V. so as to include both the principal and the accessory functions of the mind—अत्र समवेतकारणत्वे सत्यसमवेतभोगकारणत्वं नियतत्वशब्दार्थः § *i. e.* the word नियत implies the instrumentality of mind both to the cognition of those things, that are intimately united with soul as well as of those that are not so united. More probably it implies that the same mind is always associated with the same soul and accompanies him through his successive births; otherwise we cannot account for survival of impressions acquired in previous births. It may also be mentioned here that some assume मनस्त्व as a जाति residing in all individual minds, while others deny it.

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* S. C. *loc. cit.*
† V. S. III, 2, 1.
‡ G. S. I, 1, 16.
§ V. V. *loc. cit.*

3. The most important property of mind is its infinitesimality (अणुत्व), because it is necessary to explain its chief function, that of acting as a connecting link between the soul and the external organs. The *Mîmâmsakas* hold mind to be all-pervading, and their argument is मनो विभु । स्पर्शात्यन्ताभाववत्त्वा-दाकाशवत्, or मनो विभु । विशेषगुणशून्यद्रव्यत्वात् कालवत्, or मनो विभु । ज्ञानासमवायिकारणसंयोगाधारत्वादात्मवत्.* This inference by analogy however is contradicted by our experience, for if mind be all-pervading it will be in contact with all organs of sense at once, and there will be a variety of perceptions simultaneously. Not only so, but as this contact of mind with the senses will continue always, there will be no sleep or cessation of knowledge. The contact of mind with the organs must therefore be occasional and voluntary, and the mind therefore must have a limited magnitude so that it can be attached to and severed from the organs at pleasure. The argument employed by T. D. is a little different and is not quite correct. If mind be all-pervading, there will be no contact of mind with the all-pervading soul, for it is a *Nyâya* doctrine that two all-pervading substances can never be mutually in contact. To this the *Mîmâmsaka* has an obvious reply that he does not accept the *Nyâya* doctrine, and therefore there is no impossibility of आत्ममनःसंयोग in his theory. T. D. thereupon urges that if such a contact between two all-pervading things be admitted it will be eternal and continuous, and there will be no sleep. The *Nyâya* can account for sleep by supposing that it is induced when the atomic mind enters a particular vein in the body, called पुरीतत्; but the *Mîmâmsaka* cannot do so, for even assuming that आत्ममनःसंयोग ceases as soon as mind enters the पुरीतत्, there will be still some portion of it outside as, being all-pervading, the whole of it can never be contained in पुरीतत्, and the contact of this out-lying portion with soul will never cease. The weakness of this argument of T. D. lies in the assumption that the contact of mind with soul

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* V. S. Up. Calc. ed. p. 165.

ceases as soon as the former enters पुरीतत् ; but no reason is given for this assumption. Even granting that the mind is atomic, the continuity of its contact with soul cannot be prevented, for the soul being all-pervading must be present wherever the mind may be situated. The difficulty in fact will be greater, for in this case the *Naiyâyika* cannot take shelter behind his doctrine of non-contact of all-pervading things. This difficulty is sought to be removed by the arbitrary assumption that the contact of mind with soul ends at the mouth of पुरीतत्. As a matter of fact if the soul is all-pervading it should be present in, as well as out of the पुरीतत्, and the contact of mind with it should never cease. An alternative assumption to account for the same phenomenon of sleep is that there is no त्वगिन्द्रिय in पुरीतत्, and that contact of mind with त्वक् is a necessary condition for all knowledge, त्वङ्मनःसंयोगो ज्ञानसामान्ये कारणमित्यर्थः ;* but this is as arbitrary as the above. The argument based on आत्ममनःसंयोग is not therefore as satisfactory as the other one based on इन्द्रियमनःसंयोग. The phenomena of sleep and knowledge can be sufficiently accounted for by conjunction and severance of mind with organs of sense, even if the आत्ममनःसंयोग is continuous.

Theory of sleep.

4. The *Naiyâyika* theory of sleep already hinted above is peculiar. पुरीतत् is an intestine somewhere near the heart and conceived as a sort of a fleshy bag in which the mind remains during sleep. The process is thus described by *Dinakar-bhatta*:—

"प्रथमं सुषुप्त्यनुकूलमनःक्रियया मनसाऽत्मनो विभागः, ततः आत्ममनःसंयोगनाशः, ततः पुरीतदात्मकोत्तरदेशेन मनसः संयोग उत्पद्यते; सैव सुषुप्तिः†

The पुरीतत as well as the theory of sleep based upon it are not however pure inventions of the *Naiyâyikas*. Both are more or less fully described in ancient writings, and the originality of the *Naiyâyikas* consists simply in the way they adapted them to their own pshychological system. Texts like

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* S. M. Calc. ed. p. 48.

† Din. Bomb. ed. p. 115.

"अथ यदा सुषुप्तो भवति यदा न तस्य च वेद हिता नाम नाड्यो द्वासप्ततिसहस्राणि हृदयात् पुरीततमभिप्रतिष्ठन्ते ताभिः प्रत्यवसृप्य पुरीतति शेते"* had already formulated a physical theory of sleep which all orthodox schools were bound to accept, modifications being permitted only where the *Śruti* was silent. The above text of *Bṛihadâraṇyakopanishad* for instance, vaguely says that *he* or *it* entered from the heart to the पुरीतत् by way of seventy-two thousands of arteries; and hence the *Vedântins* take that *he* to be जीव, while the *Naiyâyikas* take *it* to be मनस्. This पुरीतत्, which is said to be joined to the heart by 72000 feeder arteries, is also called सुषुम्ना नाडी by *Yogins* and *Vedântins*, who describe it as opening at the top of the head called रन्ध्र and as being the path by which the soul of a ज्ञानी passes out of the body to the solar region.† The *Naiyâyikas* of course with their usual shrewdness adopted only so much of this anatomy as suited their purpose and substituted mind for the पुरुष of the original. The notion of this entrance of the thinking element into some narrow vein near the heart was probably derived from the observed slackening of the blood circulation in the arteries, and the consequent slower palpitations of the heart during sleep. Anyhow modern anatomy and physiology do not support the theory.

Is mind an organ.

5. Whether the word इन्द्रियं is inserted in the definition of mind to exclude आत्ममनःसंयोग or to repudiate the docrine of an opponent, it is certain that both the *Nyâya* and *Vaiśeshika* schools agree in calling mind an इन्द्रिय; or rather the *Nyâya* expressly says so and the dogma is imported into the *Vaiśeshika* system as one that is not explicitly repudiated by *Kaṇâda*, according to the maxim अप्रतिषिद्धमनुमतं भवति.‡ Mind must be called an organ, because it is the instrument of internal perception. Other doctrinairs, and especially the *Vedântins*, deny इन्द्रियत्व to mind. As the point has considerable bearing on the *Nyâya* definitions of perception and inference

* Bṛih. Up. IV. 1, 19.

† Śankara-Bhâshya on *Brahm Sût* III, 2, 7.

‡ Vât. on G S. I 1, 1.

as well as on some other kindred topics, it will be worth while here to explain it once for all. प्रत्यक्ष will be presently defined as इन्द्रियार्थसंनिकर्षजन्यं ज्ञानम्. If the mind is not इन्द्रिय, the definition will not cover perception of pleasure and pain, while, if mind is इन्द्रिय, it will overlap on अनुमिति which also results from contact of mind with external objects such as the mountain and smoke. It will be seen further on how *Naiyâyikas* get out of this dilemma, but the fact that it arises has sufficed the *Vedântin* to deny इन्द्रियत्व to mind. The chief consideration however which weighs with the *Vedântin* is authoritative texts of *Śruti* like "इन्द्रियेभ्यः पराह्यर्था अर्थेभ्यश्च परं मनः"*, in which mind is not only mentioned separately but placed on a higher level than the organs, thereby implying that mind is not इन्द्रिय. As to the other horn of the dilemma, namely that mental perception will not come under the given definition of प्रत्यक्ष, *Vedântins* escape it by repudiating the *Nyâya* definition of perception itself as incorrect. † It must also be remembered that though the later *Naiyâyikas* stoutly maintain the इन्द्रियत्व of mind, the doctrine is not expressly stated in either of the *Sûtras*. While *Kanâda* is admittedly silent upon it, *Gotama* does not include mind in the list of organs,‡ but mentions it separately among his *Prameyas*.§ After all the controversy seems to be nothing more than a battle of words. So long as all are agreed in distinguishing mind from the five external organs, and treating it as an entity by itself, it does not matter whether you call it इन्द्रिय or अंतःकरणवृत्ति or anything else. If mind is an organ it is an internal organ (अन्तरिन्द्रिय) quite distinct from the external organs, while if it is not an organ it is so much akin to one that it shares many of its properties and functions.

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* Kaṭh. U. p. III, 10.

† *Vedânta-Paribhâshâ* Calc.ed. p. 3.

‡ G. S. I, 1, 12.

§ G. S. I, 1, 9

SECT. XIX. रूपम्.

Colour is the (special) quality which is cognised by eye alone. It is of seven kinds, and resides in earth, water, and light. All the seven are found in earth, pale white in water, and brilliant white in light.

Colour.

1. The definitions of colour, savour, odour and touch are taken from *Praśastapâda's* scholium with the exception of the words मात्र and गुण. The latter words seem to have been suggested by *Śrîdhara's* comment.* The word मात्र excludes number which is cognised by eye as well as touch; while गुण excludes on one side प्रभा which is *dravya*, and on the other रूपत्वजाति, it being a rule that the जाति and अभाव of a thing are perceived by the same sense as the thing itself. But the प्रभाभित्तिसंयोग, being a *guna*, will still come in; and to exclude it therefore the word गुण is interpreted as विशेषगुण special quality, although T. D. seems to take the word in its general sense. Why then, one might ask, insert मात्र when सङ्ख्या too like संयोग might be excluded by taking गुण in the sense of विशेषगुण? The answer is that मात्र is also necessary to exclude सांसिद्धिकद्रवत्व. This is obviously a refinement of a later commentator (S. C.), for T. D. does not notice it. V. V. is not satisfied with the definition in the text, hedged as it is with so many qualifications, because परमाणुरूप which is imperceptible to the eye is not included in it. V. V. therefore proposes as a better definition त्वगग्राह्य-चक्षुर्ग्राह्य-गुणविभाजकधर्मवत्त्वम्. The prefix त्वगग्राह्य serves the purpose of मात्र; while by saying गुणविभाजकधर्मवत्त्वम्, which is the same as गुणत्वावान्तरजातिमत्त्वम्, instead of mere गुणत्वम्, we include परमाणुरूप which has a गुणत्वावान्तरजाति, namely रूपत्वजाति, although it is not चक्षुर्ग्राह्य itself. The purpose can equally be served by adopting the enlarged definition suggested by T.D. to exclude संयोग. It is needless to remark that ग्रहण or cognition means here our ordinary cognition, and not the supernatural perception of *Yogins* who can perceive anything by any organ of sense they please. *Śaṅkara Miśra*† gives four

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* P. B. *Ben. ed.* p. 104. *et. sep.*

† V. S. Up. Calc. ed. p. 201.

necessary conditions for the perception of colour, *viz.* 1. large magnitude (महत्परिमाण), 2 visibility (उद्भूतत्व), 3 not being overpowered (अनभिभूतत्व), and 4 the property रूपत्व. The colour of atoms is not perceived because atoms have not a large magnitude; the whiteness of the eye is not perceived because it is अनुद्भूत; the whiteness in common fire and the lustre of rubies are unperceived owing to their being overpowered by earthy matter; while savour and touch are unperceived because they have no रूपत्वजाति. The modern theory first propounded by Newton is that colour belongs to light only and that a ray of white light contains all the primary colours which can be separated by a prism of glass. An object appears to have the colour which it reflects. The colours of earth and water are therefore not their own, but are derived from the particular rays reflected from them.

Varieties of Colour.

2. Colour is of seven kinds, white, blue, yellow, red green, tawny and variegated. This enumeration of seven colours is not known either to *Praśastapâda* or *Śrîdhara*. and is probably borrowed from some later writer. The last variety being a mixture of the preceding six, it is naturally asked why चित्ररूप is recognized separately. Instead of supposing a new colour why cannot, says the objector, चित्ररूप be called simply a mixture of several colours, and a variegated piece of cloth be simply designated as having so many colours. To this T. D. replies that, colour being a व्याप्यवृत्तिधर्म, there cannot be several colours in one and the same object.

A व्याप्यवृत्तिधर्म is defined as स्वसमानाधिकरणात्यन्ताभावाप्रतियोगी धर्मः, *i. e.* a quality which never co-exists with its own अत्यन्ताभाव (absolute negation) in one and the same object. The opposite of this is an अव्याप्यवृत्तिधर्म which is a quality that resides in a portion of the object only, and is therefore co-existent with its own absolute negation residing in another portion of the same object. Thus when a monkey sits on the top of a tree, the monkey touches the top only and not the root of the tree. The कपिसंयोग is therefore said to be अग्रावच्छिन्न, residing in the top, while its अत्यन्ताभाव is मूलावच्छिन्न, residing in the root of the same tree. This संयोग is therefore an अव्याप्यवृत्तिधर्म.

व्याप्यवृत्तिधर्म is a quality which covers the entire thing and not a part of it only, like the whiteness or blueness of a jar which resides in all its parts.

If चित्ररूप be only a collection of several colours, each individual colour will be अव्याप्यवृत्ति, *i. e.* partial, while there will be no one colour covering the whole. What of it if there be not, rejoins the objector; can we not still perceive the piece of cloth by means of the colours of its parts? You cannot, says the author, for there is no colour in the piece of cloth as a whole, and without a colour you cannot perceive an object. But are there not so *many* instead of one colour in the piece? They are useless, replies the author, to make it visible, because individually they reside in parts only, while collectively they do not form one quality of the whole, it being a peculiar doctrine of the *Naiyâyikas* that a collection (समुदाय) is not a thing by itself apart from its components. A समुदाय, if it exists apart from its parts, would be a product different from its parts; but where would it then reside? Not in each part, nor in all put together, since it is distinct from all of them. समुदाय is therefore not distinct from the parts and is, like द्वित्वादिसंख्या, only a पर्याप्तधर्म *i. e.* a conjoint attribute. Such being the case, a collection of several colours cannot by itself constitute a quality which would make the piece of cloth visible. But here a question arises, why is a colour at all necessary for the perception of a thing? Let the condition precedent for perceptibility be not रूपवत्त्व, possession of colour, but रूपवत्समवेतत्व, the state of being intimately united with things having colour. So although the piece of cloth may not have a colour of its own, it is in intimate union with parts that have colour, and will be therefore perceptible. The objection to this view is that such a condition precedent (रूपवत्समवेतत्व) for perceptibility is unnecessarily elaborate and therefore not preferable to the usual one रूपवत्त्व. The result of this discussion is that we must recognize an independent चित्ररूप to account for the perceptibility of a variegated piece of cloth.

3. The definition and divisions of रूप must have already shown to a critical student that the *Naiyâyika* conception of

रूप is somewhat restricted. It is clear that what we ordinarily call the form or shape of a thing (आकारविशेष), such as its roundness or squareness, is not comprehended under रूप. It neither falls under any one of the seven colours, nor does the definition चक्षुर्मात्रग्राह्यगुणत्वं apply to it, for form can be apprehended by the eye as well as by touch. Hence रूप is translated here by 'colour', although in popular parlance it signifies form as well. Under what head then would this form go? *Naiyâyikas* call it simply an अवयवसंस्थानविशेष particular arrangement of parts, and as such would probably include it under संयोग. Other scholastics such as the *Vedântins* do not regard form as in any way distinct from the thing or its parts; for, they say, we recognize the same identical person in a देवदत्त standing and a देवदत्त sitting although the arrangements of his limbs (अवयवसंस्थान) are different in the two cases. The point is noticed here simply to clear a possible doubt.

Distribution of colours.

4. Colour of all sorts resides in earth, while water and light have only one kind, namely white. The whiteness of light however being brilliant differs from that of water which is not so. The meaning of the passage is clear; but curiously the reading in the majority of the copies of the text is unsatisfactory if not actually corrupt, rendering the passage almost unintelligible. Only two Mss. in fact give the correct reading which is adopted in the text, others mostly reading अभास्वरं शुक्लं and भास्वरं शुक्लं, and thus apparently making अभास्वरं and भास्वरं independent attributes of रूप and not qualifications of whiteness as they really are. There are no separate colours like भास्वर and अभास्वर, but the words are introduced to distinguish between the particular sort of whiteness that resides in water from that which resides in light. Even with the reading भास्वरं शुक्लं we can no doubt get the right meaning by taking भास्वरं to be an adverb modifying the adjective शुक्लं; but then the construction becomes extremely awkward. In any case there ought to be no doubt as to the real meaning of the passage.

SECT. XX, XXI, XXII. रसः, गन्धः, स्पर्शः.

Savour is the quality apprehended by tongue; it is of six kinds: sweet, sour, saline, pungent, astringent and bitter; it resides in earth and water: earth contains all the six varieties; water only the sweet.

Odour is the quality apprehended by nose; it is fragrant and non-fragrant, residing in earth only.

Touch is the quality apprehended by skin only; it is of three kinds: cool, hot, and tepid, residing in earth, water, light and air; of these cool touch is (found) in water, hot in light and tepid in earth.

Savour.

1. The three qualities of savour, odour and touch are here grouped together as they are treated symmetrically. कटु and तिक्त mean pungent and bitter respectively, and not *vice versa*, as Ballantyne translates them wrongly. Earth has all varieties of savour, while water has only one, viz. sweet. Other tastes, such as sourness and salt, which are sometimes apprehended in water, are due to the dissolution of earthy matter in it.

Odour.

2. Odour is apprehended by the nose and is of two kinds, fragrant and non-fragrant, residing in earth only. चित्ररस is not recognized because we never experience it, the several savours when mixed in one substance being in reality apprehended separately and one after another. चित्रगन्ध and चित्रस्पर्श are impossible because their varieties are mutually repellent, and cannot therefore reside in one substance at one time. The word मात्र is omitted in the definitions of रस and गन्ध as unnecessary because the two organs apprehend their respective qualities only and nothing else. It is however necessary in the definition of स्पर्श for the sense of touch apprehends other qualities besides touch, such as number and conjunction which are also perceived by the eye. The word गुण is retained in the three definitions to exclude the जाति respectively residing in the three qualities, viz. रसत्व, गन्धत्व and स्पर्शत्व. It is needless to remark that the three definitions are to be understood as जातिविशिष्ट (e. g. रसनग्राह्यजातिमान्) in order to include the qualities in atoms.

Touch.

3. *Annambhatta* following old authors divides स्पर्श into three kinds, hot, cold, and temperate; but some others are for recognizing चित्रस्पर्श also, the reason given being the analogy with colour (चित्रस्पर्शस्तु रूपस्थलीययुक्त्या

स्वीकरणीय एव*). चित्रस्पर्श however is not so possible in the three-fold division as in the theory of those who divide स्पर्श into numerous kinds such as:—

> रूक्षः शीतस्तथैवोष्णः स्निग्धश्च विशदः खरः ।
> कठिनश्चिक्कणः श्लक्ष्णः पिच्छलो दारुणो मृदुः ॥
> एवं द्वादशविस्तारो वायव्यो गुण एव च† ।

The idea seems to be that the eye and the organs of touch being the chief organs through which most of our perceptible knowledge is derived, चित्ररूप and चित्रस्पर्श have to be recognized to account for the perception of a whole having variegated parts. No such necessity however exists in the case of objects having different odours or savours, as even if they are never perceived at all, they can be inferred from their qualities. The same is the case with स्पर्श according to those who deny स्पार्शनप्रत्यक्ष to objects having touch. Hence *Śankara Miśra* remarks: न च हरीतक्यां रसोऽपि चित्र इति वाच्यं । हरीतक्या नीरसत्वे दोषाभावात्."‡

SECT. XXIII. पाकजापाकजत्वे.

The four qualities, colour etc., are products of heat and non-eternal in earth; elsewhere they are natural and either eternal or non-eternal. Those inhering in eternal things are eternal; those in non-eternal things are non-eternal.

Production of qualities

1. The four qualities colour, savour, odour, and touch are both eternal and non-eternal; they are sometimes produced by heat, and sometimes they are natural. In earth they are said to be produced by heat, and are consequently non-eternal, while in the remaining three substances they are natural, and are both eternal and non-eternal, the eternal being confined to the eternal atoms, and the non-eternal belonging to products which are non-eternal. The author is silent as to whether natural and eternal odour resides in the atoms

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* V. S. Up Calc. ed. p. 292.

† *Mahâ-Bhârata.*

‡ V. S. Up, Calc. Ed. p. 286.

of earth. If it does, the words पाकजमनित्यं च ought to be supplemented by the further addition अपाकजं नित्यं. The distinction between पाकज and अपाकज appears to be that earth can change its qualities by the application of heat, while water, light and air do not change them. Not that water and air do not become hot by the contact of heat, but the change of touch in their case does not affect the material but belongs to the light that is mixed with them.

The controversy of Pîlupâka and Pitharapâka.

2. T. D. here states briefly the rival theories about पाकजोत्पत्ति, that sharply divide the *Vaiśeshikas* from the *Naiyâyikas*. The former are called पीलुपाकवादिनः because they explain the change of colour in an unbaked jar by the separate baking of individual atoms, while the *Naiyâyikas* are called पिठरपाकवादिनः because they supposed the change of colour to be accomplished in the jar itself. पाक is defined as रूपादिपरावृत्तिफलक-विजातीयतेजः-संयोगः, application of external heat which effects a change of colour and other qualities. It is of various kinds according to the effects, one changing only colour as in a baked jar, another changing colour, odour and savour as in an artificially ripened mango-fruit, and so on. The word विजातीय excludes a change by heat in metals, which, being तैजस्, are सजातीय. When a jar is baked the old black jar is, according to *Vaiśeshikas*, destroyed, and its several compounds of binaries etc. are also destroyed. The action of the fire produces the red colour in separate atoms, which are then joined by the same action of fire into new compounds, and eventually produce a new red jar. This complicated process of dissolution and reconstruction of the jar is necessary to allow all the atoms in the jar to be baked, for if the jar remained intact, the fire cannot penetrate it and bake the atoms in the interior. The reason why we cannot perceive this process of dissolution and reconstruction is its great rapidity. The time occupied by this process has been variously computed, some holding it to be nine moments, others ten, others eleven, and a fourth school, five only. The order of nine moments, which is generally

accepted, is thus given by *Viśvanâtha*:—* "तथाहि (१) वन्हिसंयोगात्कर्म । ततःपरमाण्वन्तरेण विभागः । तत आरम्भकसंयोगनाशः । ततोव्द्यणुकनाशः । (२) ततः परमाणौ श्यामादिनाशः । (३) ततो रक्ताद्युत्पत्तिः । (४) ततो द्रव्यारम्भाद्गुणक्रिया । (५) ततो विभागः । (६) ततः पूर्वसंयोगनाशः । (७) तत आरम्भकसंयोगः । (८) ततो द्व्यणुकोत्पत्तिः । (९) ततो रक्ताद्युत्पत्तिः". Of these the first four steps constitute the first moment marking the gradual destruction of the binary, and make up, together with the following eight ones, the total number of nine moments. Those who accept a disjunction arising from disjunction (विभागजाविभाग) make ten moments by adding after the third another step वह्निनोदनजन्यपरमाणुकर्मणो नाशः cessation of the action in the atoms produced by the original conjunction of fire; while the advocates of eleven moments add another disjunction after the first step. Again, if of the nine moments above described we take the first, the second, then the next two, then the next four, and then the last, we have the time divided into five moments only.† To this fantastical theory the *Naiyâyikas* who advocate पिठरपाकवाद object on the ground that, if the first jar is destroyed and a new one substituted, the identity of the jar can never remain intact. We recognize the jar to be exacty the same jar as before; we observe the same through all stages of baking; and other pots placed over it do not tumble down, as they must if their support is completely destroyed even for a moment. Again how do the number, the shape and even the lines on the jar remain the same ? These strong objections are answered by the counter question, how does the identity of a jar remain intact even if we scratch some particles out of it with a needle-point, although the jar after scratching becomes minus some particles and is quite different from the former one ? ‡ The followers of *Nyâya* therefore accept the simpler and on the whole the more reasonable theory of the change of colour being accomplished without

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* S. M. Calc. Ed. p. 103.

† For further explanation see V. S. Up. Calc. ed. p. 291, Roer's Trans. of B. P. *Bibl. Ind.* pp. 57-9, and Sarva, D. S. Cowell's Trans. p. 154.

‡ V. S. Up. Calc. ed. pp. 289-90.

the total dissolution and reconstruction of the jar. The objection how fire can reach the atoms is met with by the practical instance of water boiling inside a pot placed over fire without actual touch. In this way the controversy between the पीलुपाक (baking of atoms) and the पिठरपाक (baking of the pot) has been carried on by their respective partisans with scholastic subtility and an amount of energy, that are quite disproportionate to the importance of the result. The doctrine of पीलुपाक has in fact become one of the standing test of distinguishing a genuine *Vaiśeshika* from his rival the *Naiyâyika* proper.

Vaiśeshikas and Naiyâyikas.

3. The chief points of distinction between the two schools are stated in the following distich:—

द्वित्वे च पाकजोत्पत्तौ विभागे च विभागजे ।
यस्य न स्खलिता बुद्धिस्तं वै वैशेषिकं विदुः ॥

The *Vaiśeshika* doctrines about द्वित्व and विभागजविभाग will be explained subsequently. Whatever view of पाकजोत्पत्ति we adopt, it is certain that the qualities in earth are non-eternal. According to the *Vaiśeshika* पीलुपाक, even गन्ध in earthy atoms seems to be non-eternal; but the other theory leaves the point doubtful.

SECT. XXIV. संख्या.

"*Number is the* (*special and instrumental*) *cause of the common usage of* (*words*) *one, two etc.*" *It resides in the nine substances from one to Parârdha. Oneness is eternal and non-eternal, eternal in eternal substances, and non-eternal in non-eternals. Duality and the rest are only non-eternal everywhere.*

Number.

1. The definitions of संख्या and परिमाण in the text are taken from *Praśastapâda.** The word हेतु here, as in the definition of time, is to be understood in the sense of असाधारणनिमित्तकारण, असाधारण in order to exclude universal causes like time and space, and निमित्त to exclude ether which is the

* P. B. Ben. ed. pp. 111-30.

material cause of all व्यवहार. Number is the first of the common qualities, *i. e.* those which reside in all the substances. They are enumerated as follows.—

सङ्ख्यादिरपरत्वान्तो द्रवः सांसिद्धिकस्तथा ।
गुरुत्ववेगौ सामान्यगुणा एते प्रकीर्तिताः ॥*

Number, dimension, severalty, conjunction, disjunction, priority and posteriority, these seven, together with derivative fluidity, gravity and velocity, are qualities common to all substances. They appertain to substances in general, and not to any particular kind of substance; and hence they cannot be due to special characteristics which distinguish one class from another. It will be noticed that all these qualities connote really a state, aspect or arrangement of the thing or its parts, and not any attribute inherent in the thing itself. They are, to adopt modern phraseology, subjective or notional rather than objective or material. They are in fact imposed upon the thing by the operation of our own mind; that is, as the *Vedântin* would say, they are अध्यस्त or आरोपित. It is true that we apprehend them, but we cannot assert positively whether they have a real existence in the external object or are merely conceptions of our own mind imposed upon the object. It will be more correct to say that we conceive them than that we perceive them. The special qualities (विशेषगुण) on the other hand, which have been already enumerated, have a real objective existence. Number of course is pre-eminently a subjective property and varies at our will, for we can contemplate a number of things, each as one separately, or all as so many, or all as one collection. The *Vaiśeshikas* had undoubtedly realized the true nature of number, for they called duality and the higher numbers अपेक्षाबुद्धिजन्य.

Out of the numbers which are ordinarily counted from one to a *parârdha* or a lakh of lakhs of crores, unity resides in eternal substances like atoms, while the other kinds are found

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* B. P. 90—1.

in products. The transientness of non-eternal unity in products arises from the fact that a log of wood ceases to be one when you break it into pieces. Numbers from duality onwards being अपेक्षाबुद्धिजन्य are non-eternal. *Śankara Miśra* regards बहुत्व, *i. e.* an indefinite multitude, as a separate number apart from त्रित्वादि which are all definite; but this opinion is not generally accepted.*

What is duality.

2. The verse quoted in Note 3 on Sect. XXIII† mentions द्वित्व as one of the three contested points between *Nyâya* and *Vaiśeshika* schools. The *Vaiśeshika* view, which is no doubt shared by *Annambhatta*, is that all numbers from duality onwards are produced (जन्यं) and not simply made known (ज्ञाप्य) by अपेक्षाबुद्धि. अपेक्षाबुद्धि is defined अनेकैकत्वबुद्धिर्या साऽपेक्षाबुद्धिरुच्यते‡, which may be translated as "the notion which refers to many unities is called the अपेक्षाबुद्धि." It is difficult to translate अपेक्षाबुद्धि by "comprehending intellect" as Roer does, or by any other exact English equivalent; but its meaning can be easily understood. When two things are brought before us, we do not at once cognize them as two, but first apprehend each one separately, as this one and that one. These separate notions are denoted by the term अपेक्षाबुद्धि. When the conceptions of these two unities are formed in our mind, they are joined together and produce one general notion of duality; and then we get the knowledge that there are two things. The process is thus described :—

" तत्र प्रथममिन्द्रियार्थसंनिकर्षः । तस्मादेकत्वसामान्यज्ञानम् । ततोऽपेक्षाबुद्धिः । ततो द्वित्वोत्पत्तिः । ततो द्वित्वसामान्यज्ञानम् । तस्माद्द्वित्वगुणज्ञानम् । ततः संस्कारः ।

First we have the contact of the organ of sense with the object (*i. e.* each of the two jars); thence arises the knowledge of the genus unity (apart from the individual); then the distinguishing perception, अपेक्षाबुद्धि by which the notion of unity is realized in each of the objects, and we

* V. S. Up. Calc. ed. p. 322.
† *Supra.* p. 159.
‡ B. P. 108.
§ *Sarv.* D. S. Calc. ed. p. 10.

apprehend "this is one," "this is one" etc. then the production of duality by the combination of separate unities; then the knowledge of the abstract genus of duality; then the cognition of that quality of duality as existing in the two things; and lastly the consciousness that we see two things. In this way we derive the complex knowledge of two, three etc. from the simple notions of unity. The reason why द्वित्व is regarded as अपेक्षाबुद्धिजन्य and not अपेक्षाबुद्धिज्ञाप्य is rather subtle. It is that अपेक्षाबुद्धि cannot simply be the ज्ञापकहेतु of द्वित्व like a stroke which reveals a sound lying dormant in ether; but it is the कारकहेतु of द्वित्व, because it is always found inseparably associated with द्वित्व, while a ज्ञापकहेतु need not be so (अपेक्षाबुद्धिर्द्वित्वादेरुत्पादिका । व्यञ्जकत्वानुपपत्तेः । तेनानुविधीयमानत्वात् । शब्दं प्रति संयोगवत्). *Mâdhavâchârya* gives a simpler argument, viz. that the non-eternal अपेक्षाबुद्धि cannot be ज्ञापक of द्वित्व, which, like the quality पृथक्त्व, resides in several objects conjointly; while अपेक्षाबुद्धि resides in each object separately, and hence it must be the जनकहेतु of द्वित्व. The importance of this subtle distinction lies in the different views of द्वित्व to which it leads. According to one, द्वित्व is an independent reality, different from the several unities of which it is composed and generated by अपेक्षाबुद्धि; according to the other view it is already comprehended in the unities, and is only revealed when several of them are brought together. It may be further mentioned that both the notion of duality and its generating cause अपेक्षाबुद्धि vanish away when their purpose is served, that is, when the objects are actually perceived as two. As soon as द्वित्वगुणबुद्धि, the result of अपेक्षाबुद्धि, is produced, the latter which lasts for three moments only is destroyed, and with its destruction, its direct effect, the duality, is also destroyed, and there only remains the cognition 'two *dravyas*'. The steps follow in this order : 1 एकत्वज्ञान; 2 अपेक्षाबुद्धि; 3 द्वित्वोत्पत्ति and एकत्वज्ञाननाश; 4 द्वित्वज्ञान; 5 द्वित्वगुणबुद्धि and अपेक्षाबुद्धिनाश; and 6 द्वित्वनाश and द्रव्यबुद्धि. The reason for this assumed destruction of अपेक्षाबुद्धि and द्वित्वबुद्धि is rather technical, being founded on the *Vaiśeshika* doc-

trine that all cognitions, being qualities of the all-pervading soul, last for three moments only, and are destroyed by the generation of their effects. The student has been led through this labyrinth of speculative subtility in order to acquaint him with the exact import of *Annambhaṭṭa's* simple dictum, द्वित्वादिकं तु सर्वत्रानित्यमेव, that is, duality and other larger numbers are always अनित्य.

SECT. XXV. परिमाणम्.

Dimension is the (special and instrumental) cause of the common usage of measurement. It resides in the nine substances, and is of four kinds: minuteness, largeness, length and shortness.

Dimension.

1. Each of the four kinds of dimensions mentioned above may again be divided into two kinds, as मध्यम middling and परम extreme. Thus an atom has extreme minuteness, which is also technically called पारिमाण्डल्य (infinitesimality) from परिमण्डल a globular atom; a binary has मध्यमाणुत्व middling minuteness; *Âkâśa* has परममहत्त्व or विभुत्व all-pervasion; and all tangible objects such as a jar have मध्यममहत्त्व intermediate greatness. The comparaive use of these words, as this pearl is minuter or larger than that other, is secondary. The distinction between अणु and महत् on the one hand and दीर्घ and ह्रस्व on the other seems to be that the first two denote magnitudes of two or three dimensions *i. e.* bulk, while the latter two denote one dimension only such as a line. This four-fold division of परिमाण is after all rough, many including ह्रस्वत्व and दीर्घत्व in अणुत्व and महत्त्व respectively. As a matter of fact all of them are relative terms, and denote different numbers of constituent parts or degrees of contact in which they are combined. परिमाण is again divided into नित्य and अनित्य; that residing in eternal things as पारिमाण्डल्य and विभुत्व being नित्य, and all the rest अनित्य. अनित्यपरिमाण is threefold संख्याजन्य, परिमाणजन्य and प्रचयजन्य. For the explanation of these see Notes 9 and 10 on Sect. XIII. pp. 121-3, *supra.*

SECT. XXVI. पृथक्त्वम्.

Severalty is the (special and instrumental) cause of the common usage of one thing being different from another.

Severalty.

1. The definition in the text is rather crude. A better though a little more abstruse definition of पृथक्त्व is अपोद्धारव्यवहारकरणम् the cause of our practice of separating one thing from all the rest.* अपोद्धार is अपकृत्यावधिमपेक्ष्य य उद्धारो निर्धारणम् सः that is, the determination of the identity of one thing by separating it from all others. The reason why पृथक्त्व is regarded as distinct from अन्योन्याभाव is that the notions conveyed to our mind by the two are of different sorts. When we say घटः पटो नास्ति we simply get a negative notion, that a jar is not a piece of cloth; while by पटाद्घटः पृथक् we get a positive notion that one is quite distinct from the other. पृथक्त्व therefore tells us something more than अन्योन्याभाव, for it not only informs us that a jar is not a piece of cloth but also that it is a different thing. The importance of this distinction may be illustrated by another example. We can say that a jar is *not* the quality of blueness residing in it, but we cannot say that it is distinct from it, the two being inseparably connected. Similarly we can say that a black unbaked jar is not the same red jar when baked, but it is not पृथक् from it. Again we can say दण्डी देवदत्त is not देवदत्त without a दण्ड, but the two are not distinct persons. In short पृथक्त्व is opposed to objective identity of the things, while अन्योन्याभाव to the sameness of their natures. पृथक्त्व is a *material* distinction; अन्योन्याभाव *notional* only. In the same way पृथक्त्व can be distinguished from वैधर्म्य or वैशिष्ट्य.

SECT. XXVII. संयोगः.

1. *Conjunction is the (special and instrumental) cause of the common usage of calling two things united.*

Conjunction.

1. संयोग is also defined as the contact of two things that were first separate (अप्राप्तयोस्तु या प्राप्तिः सैव संयोग ईरितः†); and therefore there can be no संयोग between two all-pervading things which

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* P. B. Ben. ed, p. 138.

† B. P. 114,

are never apart from each other. संयोग is always artificial and non-eternal. T. D. divides it into two kinds, कर्मज that born of action, and संयोगज that produced by another conjunction. The contact of the hand with the book is of the first kind, because it is produced by the motion of the hand, while this contact of the hand with the book, produces another conjunction, namely, that of the body with the book, which is therefore संयोगज. The कर्मज संयोग is again of two kinds, अन्यतरकर्मज and उभयकर्मज. The instance of the first is the contact of the bird with the mountain, in which the bird alone moves while the mountain is stationary. The examples of the second kind are the meetings of two fighting rams, or of two wrestlers, or of two clouds, where both the things move. संयोगज again is two-fold, that of a thing just produced, such as the contact of an effect with something already connected with its material cause, and that of a thing previously existing, as the contact of the tree in consequence of the contact of the hand and the tree. All kinds of contacts are अव्याप्यवृत्ति, that is, cover only a part of the thing, and are destroyed either by separation or destruction of the आश्रय, namely the things connected.

2. Three Mss. of T. S. insert the word असाधारण after व्यवहार in the definitions of सङ्ख्या, परिमाण, पृथक्त्व and संयोग, but the reading of others who reject it appears to be the right one and has been adopted. Although the qualification असाधारण is necessary to exclude universal causes, it can be and is always presumed wherever the words कारण or हेतु occur as in the definitions of काल and दिक्; and so there is no need of its express mention. There are also other grounds to believe that the word साधारण did not exist originally but was supplied by the *Dîpikâ.* The words असाधारणेति पदं देयं in the *Dîpikâ* would of course have been conclusive on the point had they been found in all Mss. of the work. S. C. however is quite explicit, as it remarks–"उपदर्शितलक्षणचतुष्टयेऽसाधारणपदं देयम् । क्वचित्पुस्तके परिमाणपृथक्त्वलक्षणे ऽसाधारणपदं दृश्यते तच्चाधुनिकैर्न्यस्तमिति बोध्यम्."

Universal Causes

3. The साधारणकारण (universal cause) referred to in this and the preceding definitions is defined by V. V. as कार्यत्वावच्छिन्नकार्यतानिरूपितकारणम्, which signifies that a universal cause is a cause of all effects as effects, and not as particular products; as for instance, a stick is an instrument of a jar because it is a jar and not any other thing, while time and space are instrumental causes of the same jar because it is a product. These universal causes are eight, God, His knowledge, His will, His effort, (तज्ज्ञानेच्छाकृतयः) antecedent negation (प्रागभाव), time (काल), space (दिक्) and destiny (अदृष्ट) comprising both merit and demerit. Some add the absence of counteracting influences (प्रतिबन्धकाभाव) as a ninth universal cause. These being universal causes are necessarily implied wherever we speak of a cause or an effect; and consequently when a thing is specially mentioned as a cause or an effect of another, they are not meant.

SECT. XXVIII. विभागः.

Disjunction is the quality which destroys conjunction.

Disjunction

1. Disjunction is not merely the absence of संयोग, in which case it would have fallen under अभाव and need not have been reckoned as a separate quality; but it denotes an actual separation which produces the destruction of a previous contact. Again by disjunction we denote not the act of separating which is excluded from the definition by the word गुण but the state which immediately results from the act of separation. Hence *Annambhaṭṭa* defines विभाग differently, and not on the analogy of संयोग as विभक्तव्यवहारकारणम् or विभक्तप्रत्ययकारणम्, as is done by *Viśvanâtha*. The latter definitions being ambiguous may as well denote the state of being separate as the actual act of separation. The order of succession therefore is always this: first कर्म, act of separating, then separation here called विभाग, then पूर्वदेशसंयोगनाश, and lastly अपरदेशसंयोग. When we remove a jar from one place to another, we

have an effort to lift it up,–this is the कर्म; then the jar is lifted from the ground,—this is विभाग; then its contact with the particular spot is severed,—this is संयोगनाश; and lastly it is placed on another spot,—this is अपरदेशसंयोग. विभाग is therefore the cause of and not the same as संयोगनाश. Two trees on the opposite banks of a river have always remained apart, but there has never been an actual separation of them. विभाग has the same varieties as संयोग, and the examples also are similar, namely, कर्मज (subdivided into उभयकर्मज and अन्यतरकर्मज) and विभागजविभाग. There is however a difference of opinion as to the last between the *Vaiseshikas* and the *Naiyâyikas* proper, the latter not recognizing विभागजविभाग at all.* The instance of a विभागजविभाग is हस्ततरुविभागात् कायतरुविभाग: separation of the body from the tree, consequent upon the removal of the hand from the tree. Here the separation of the body is not directly caused by the motion of the hand because the two things (विभाग and हस्तक्रिया) reside in different receptacles, viz. the body and the hand respectively, while there is no motion in the body itself which might cause the separation. This argument by which the necessity of recognizing a विभागजविभाग is sought to be proved is founded on the axiom that the motion of a part is not the motion of the whole (as we see in a stationary revolving wheel) and so the motion of the hand is not itself the motion of the body. विभागजविभाग is also divided into two kinds कारणमात्रविभागज and कारणाकारणविभागज, for which however see *Sarv.* D. S. Calc. ed. p. 107.

SECT. XXIX परत्वापरत्वे.

Posteriority and priority are the (special and instrumental) causes of the common usage of the words posterior and prior. They reside in the four (substances), earth, etc. and the mind. They are twofold, caused by space and time. The posteriority caused by space is in the remote, and priority so caused is in the near. Posteriority caused by time is in the elder, and priority so caused is in the younger.

Priority and posteriority.

1. Posterioty and priority may also be designated *remoteness* and *proximity* respectively. These qualities reside in the first four substances, because they are the only corporeal and non-eternal substances having a limited di-

* See verse quoted in Note 3 on Sect. XXIII p. 159 *supra*.

mension. Mind, being corporeal, possesses only one kind of priority and posteriority, namely that made by space दिक्कृत, but not the other caused by time, as mind is eternal. The last four substances remaining are both eternal and incorporeal and cannot therefore have any kind of परत्व or अपरत्व. Really speaking परत्व and अपरत्व are nothing more than relations of corporeal things to time and space, expressed in the form of qualities for the purpose of marking their varying degrees.

SECT. XXX, XXXI. गुरुत्वम्, द्रवत्वम्.

Gravity is the non-intimate cause of the first fall, and resides in earth and water.

Fluidity is the non-intimate cause of the first flow, residing in earth, water and light. It is two-fold, natural and artificial.

Gravity and Fluidity.

1. The definitions of Gravity and Fluidity are analogous, one being called 'the non-intimate cause of the first act of falling,' and the other 'a like cause of the first act of flowing.' The word आद्य is inserted in both definitions to exclude velocity (वेग) which is the non-intimate cause of the second and all subsequent acts of falling or flowing. As a matter of fact, falling and flowing are essentially the same acts, one being the coming down of a solid from a higher level, while the other is the same act in a fluid ; but the *Naiyâyikas* do not seem to have realized this. They do not also seem to have known the dynamical theory of falling bodies, as is clear from their calling गुरुत्व the cause of the first falling only, while it is in fact the cause of every act of falling. The confusion of the two meanings of the word गुरुत्व, viz. weight and heaviness, is already noticed and commented upon.

2. Fluidity is of two kinds, natural as that of water, and artificial as that of melted ghee. The distinction between सांसिद्धिक and नैमित्तिकद्रवत्व, though spoken of as inherent and absolute, seems to have been made to indicate the fact that some things remain fluid at normal temperature and others

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* See Note 3 on Sect. IV. p. 85, *supra.*

not. Those of the first kind such as water are said to possess natural fluidity, while others requiring the application of additional heat have artificial fluidity only. The solidity of snow and hail which are forms of water is exceptional and hence does not affect the proposition.

3. Unlike gravity, fluidity is assumed in light also namely, in melted gold and other metals, while the gravity of the metals is ascribed to earthy portion in them. It might be urged that, following the analogy of gravity, even the fluidity of metals can be attributed to some watery portion in them; but this cannot be, says the *Vaiśeshika,* for in that case it would be सांसिद्धिक, while the fluidity of metals is really नैमित्तिक only. Again why cannot the same earthy portion, which accounts for the gravity of metals, also account for its नैमित्तिक द्रवत्व ? This is also not possible, for the fluidity of metals is of a different kind, being अनुच्छिद्यमान (indestructible) even by the application of extreme heat, while that of earthy substances is उच्छिद्यमान. Light in the form of metals must therefore be regarded as having a peculiar fluidity of its own.

SECT. XXXII. स्नेहः.

" Viscidity is the quality which is the (special and instrumental) cause of the agglutination of powders and resides in water only."

Viscidity

1. The viscidity found in oil, milk and such other earthy substances is of course due to the watery portion in them. How can oil, says an objector, inflame fire if there is water in it, while water itself extinguishes fire ? Here too, the *Vaiśeshika* is ready with his explanation, viz. तैलान्तरे तत्प्रकर्षाद्दहनस्यानुकूलता.* Oil hastens fire because it has a greater amount of viscidity than pure water. It is not explained however whence this greater viscidity in oil comes if it is due to water alone. पिण्डीभाव means thickening or concentration. It is the peculiar combination which holds particles of powder together. The reason why this पिण्डीभाव requires a special quality स्नेह and cannot be attributed to

द्रवत्व is that melted gold which possesses fluidity cannot form lumps of powders. N. B., however, quite appositely remarks that liquid water is alone the real cause, while solid water such as hail and ice is incapable of agglutinating particles. The fact is that the modern scientific theory of molecular attraction and repulsion which induced the three states of solid, liquid and gaseous in all matter was hardly known to Indian physicists, and hence they were often led into giving fantastic explanations of ordinary phenomena.

2. T. D., N. B. and S. C. say that the propriety of the word गुण in the definition of स्नेह is to exclude time etc.; but this does not seem correct, as time and other universal causes are already excluded by interpreting हेतु as असाधारणहेतु. V. V. explains the word as excluding चूर्ण, but this is also incorrect, since चूर्ण can be excluded by taking हेतु in the sense of निमित्तकारण as it has been hitherto taken. It appears more reasonable to understand गुण as excluding the *act* of agglutinating which is also the special and instrumental cause of पिण्डीभाव. Hence either the line कालादौ etc. in T. D., which is retained in this edition because it is found in all copies, is interpolated by some one who failed to understand the text, or *Annambhaṭṭa* deliberately used the word हेतु here in a narrower sense than previously. Probably he borrowed the definition from a more ancient work, without determining accurately the propriety of each word.*

SECT. XXXIII. शब्दः.

Sound is the quality which is apprehended by the sense of hearing, and resides in ether alone. It is two-fold, inarticulate or noise and articulate or words. The noise is (heard) in drums etc.; while words appear in the form of Sanskrit language.

Sound.

1. Besides the two-fold division in the text, the T. D. gives another three-fold division of sound, making in all six varieties of it. The latter three divisions are: 1 संयोगज, born of conjunction, such as the sound of a drum produced by the contact of the stick or hand with the drum; 2 विभागज, born of disjunction, such as the sound produced by splitting a bamboo-stick; and 3 शब्दज born of sound, such as all subsequent sounds which are produced from the first one.

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* P. B. Ben. ed. p. 266.

2. A more elaborate division of sound is the following:—

- शब्दः
  - बुद्धिहेतुकः
    - स्वाभाविकः
    - काल्पनिकः
      - वाद्यादिशब्दः
      - गीतिरूपः
      - वर्णात्मकः
        - सार्थकः
          - प्रमाणः
            - लौकिकः
            - वैदिकः
          - अप्रमाणः
        - निरर्थकः
  - अबुद्धिहेतुकः *e. g.* मेघादिशब्दः

And so on. The articulate sound will be treated further on under शब्दप्रमाण (Sect. 59–63.)

The Nyâya theory of sound.

3. The शब्दज शब्द is recognized to account for the fact that sound can be heard at any distance from the place where it is first produced. There are only two senses which apprehend their objects at a distance, namely, sight and hearing. Of these the eye is supposed to go outside to the object, and carry back its impression to the mind. But the organ of hearing being of the nature of all-pervading *Âkâśa* cannot move. श्रोत्र or organ of hearing is defined as the *Âkâśa* which is कर्णशष्कुल्यवच्छिन्न, *i. e.* the portion of ether limited and severed from the rest of the *Âkâśa* by the cavity of the ear. Evidently श्रोत्र cannot go out of the ear-cavity by which it is conditioned, for as soon as it goes out it will be no श्रोत्र but common ether. As the organ of hearing cannot go to its object, it is necessary that the object should reach the ear, so that anyhow the two may come into contact. But the sound which is produced in that portion of *Âkâśa* which is immediately in contact with the drum is distant from the ear and cannot itself travel to the ear, being, as a quality, inseparably connect-

ed with a definite portion of the *Akâśa*. Besids it is a doctrine of the *Naiyâyikas* that sound is अनित्य and cannot last for more than a few moments. This first sound therefore is supposed to produce a second similar sound in the next piece of *Âkâśa*, and this second a third; and so on, until the train reaches the portion of *Âkâśa* confined in the ear, that is, the श्रोत्र. It is this last sound produced in the श्रोत्राकाश that is directly perceived by the organ of hearing, and as it is the last of a series generated by the first sound, it is called शब्दज. So far this theory of sound is accepted by all *Naiyâyikas*, but there is a slight difference of opinion as to the mode in which sound travels or rather propagates its species. Some, applying the analogy of ocean-waves (वीचीतरङ्गन्याय), say that the series of sounds travels in a straight line in one direction only, namely from the drum direct to the ear. Others apply the analogy of a कदम्ब flower (कदम्बगोलकन्याय), the filaments of which shoot round about in all directions ; and so they say that sound travels not in one direction only but in all directions, that is, innumerable series of sounds start from the central point where it was first produced, and go in every direction. The simple fact that the sound of a drum is heard on all sides and not in one direction only is enough to prove that the latter analogy is nearer the truth than the former. The whole of the above theory of sound is very crude and faulty owing to the inveterate habit of Indian philosophers to indulge in speculations in matters that can be known only by actual observation or experiments. They did not know that the real organ of hearing is the *tympanum* in the ear which has a closer similarity with the drum than with the *Âkâśa*, while the fact of the sound being carried by air by means of successive undulations of air-particles was also undreampt of. Instead of investigating the nature of sound in such practical directions, the *Naiyâyikas* exhausted their energies in discussing whether sound was eternal or non-eternal. The pros and cons as well as the importance of this last controversy in Indian philosophy will be noticed later on.

SECT. XXXIV. बुद्धिः.

Cognition is the (special and instrumental) cause of all communication or intercourse, and it is knowledge. It is twofold, remembrance and apprehension. Remembrance is knowledge produced from mental impression alone. Knowledge other than remembrance is apprehension.

Cognition.

1. Cognition is the proper equivalent for बुद्धि as used in the *Nyâya* system. Ballantyne translates बुद्धि by 'understanding,' and Roer by 'intellect;' but both renderings are wrong. The word बुद्धि is capable of having three meanings:–1st the act of knowing, which may be called 'understanding; 2ndly the instrument of knowledge which is 'intellect;' and 3rdly the product of the act of knowing, which is 'cognition.' It is in this last sense that the word is invariably used in *Nyâya* and *Vaiśeshika* philosophies. This should be quite clear from the mention of बुद्धि among the qualities, that is, as a property of the soul. A cognition is undoubtedly such a property; while *understanding* is an act, and *intellect* being an instrument of knowledge is a substance, and is identified by *Naiyâyikas* with mind. Other schools of philosophers such as the *Sâṅkhyas* and the *Vedântins* designate बुद्धि as an elemental thing under the name महत्तत्त्व, and divide it into several faculties performing different functions, namely, अहंकार and अंतःकरण. According to them, therefore, बुद्धि is an instrument of knowledge; but their doctrine is emphatically repudiated by *Naiyâyikas* who regard बुद्धि as a quality of the soul and capable of being perceived, while the direct instrumentality of knowledge is assigned to mind which being atomic is imperceptible. Hence in the definition given in the text बुद्धि is said to be knowledge itself, and not an instrument of knowledge.

2. व्यवहार is, as V. V. rightly defines it, बुबोधयिषापूर्वकवाक्यप्रयोगः, utterance of words for the purpose of communicating ideas, and not आहारविहारादिः as S. C. has it, for the latter is too wide and would include involuntary actions, such as walking in sleep, which are not prompted by knowledge. Briefly speaking, बुद्धि is a property of the soul which prompts articulate language; or, in other words, it is thought clothed in intelligible words. This invariable association of बुद्धि and व्यवहार makes the above definition too narrow, in as

much as it does not apply to निर्विकल्पज्ञान or mere sensation, which is a species of cognition, but which can never be expressed by articulate language. V. V. therefore modifies the definition into तादृशव्यवहारजनकतावच्छेदकजातिमत्त्वम्, that is, cognition is the quality having that जाति which characterizes the efficient cause of the above kind of व्यवहार. Thus निर्विकल्पज्ञान, though itself not व्यवहारहेतु, has the जातिबुद्धित्व which differentiates the व्यवहारहेतु.

3. The definition of बुद्धि given in the text is in many respects more convenient in practice than scientifically accuate. The T. D. therefore supplies a better definition, जानामीत्यनुव्यवसायगम्यज्ञानत्वम्. Cognition is said to be that knowledge (ज्ञान) which becomes the subject (गम्य) of the consciousness (अनुव्यवसाय) having the form ' I know. ' This requires a little explanation. Perceptive knowledge according to *Nyâya* is acquired by going through three successive steps, *viz.* इन्द्रियसंनिकर्ष, ज्ञान and अनुव्यवसाय. When an object like a jar is brought before us, our organ of sight first comes into contact with it, and carries an image of the object to the mind which conveys it to the soul. This organ is called the प्रत्यक्षप्रमाण, efficient cause of perception. This image is then converted into a cognition or बुद्धि having the form अयं घटः ' this is a jar. ' This cognition (घटज्ञान) again being a property of the soul, the Ego becomes घटज्ञानवान्, which when combined with the ever present अहंकार ' I am, ' results into the compound con siousness, घटज्ञानवानहमस्मि or घटमहं जानामि ' I know a jar. ' This last consciousness is called अनुव्यवसाय because it always follows व्यवसाय or simple cognition. Hence the cognition ' This is a jar (अयं घटः) is said to become the subject matter of the consciousness ' I know. ' The peculiarity of this definition consists in the fact that other scholastics, such as the *Sâṅkhyas* and the *Vedântins*, do not recognize the cognition अयं घटः to be the गम्यमान of a further अनुव्यवसाय, but give the name cognition to अनुव्यवसाय itself. The definition thus states a peculiar doctrine of *Nyâya*.

Other definitions.

4. Another noteworthy definition of बुद्धि given in the

Sapta-Padârthî of *Śivâdityâchârya* is आत्माश्रयः प्रकाशः, which the commentator *Jinavardhana* explains, अज्ञानांधःकारतिरस्कारकारकसकलपदार्थस्यार्थप्रकाशकः प्रदीप इव देदीप्यमानो यः प्रकाशः सा बुद्धिः, knowledge is of the nature of light because it dispels the darkness of ignorance and illuminates all objects to the mind's eye. The epithet आत्माश्रयः means residing in the soul as a property, and explains *Annambhatta's* definition of आत्मा as ज्ञानाधिकरणम्, बुद्धि and ज्ञान being of course synonymous. *Praśastapâda* defines बुद्धि merely by giving उपलब्धि, ज्ञान and प्रत्यय as its synonyms.*

Reading discussed

5. The wording of the definition in four copies is different, being °हेतुर्ज्ञानं बुद्धिः instead of °हेतुर्बुद्धिर्ज्ञानम्; while two other copies add गुणः after हेतुः quite unnecessarily. The interchange of ज्ञानं and बुद्धिः has an important bearing on the right understanding of the definition; for the other reading is not only ambiguous, but is likely to mislead some into taking बुद्धि to be only one species of knowledge which is व्यवहारहेतुः. As a matter of fact ज्ञान is an independent predicate of बुद्धि intended to describe the exact nature of cognition, and probably also to exclude the possibility of बुद्धि being mistaken for the act or the instrument of knowledge. It contradicts according to S. C. the doctrine of *Sânkhyas* that बुद्धि or महत्तत्व is a material element, produced from प्रकृति and identical with अन्तःकरण the instrument of knowledge. One copy of T. D. inserts कालादावतिव्याप्तिवारणाय ज्ञानमिति, but that is incorrect, as time etc. are excluded by taking हेतु as असाधारणहेतु. Another propriety of the word ज्ञान noticed by S. C., *viz.* that बुद्धि here does not mean excess of knowledge as in expressions बुद्धिमान् देवदत्तः, is rather far-fetched. The expression is borrowed from *Gotama's* aphorism, बुद्धिरुपलब्धिर्ज्ञानमित्यनर्थान्तरम्† and is probably used as a hint to the student that *Gotama's* psychology and logic are easily reconcilable with the system of *Vaiśeshika padârthas* adopted in this book. Whatever may be

the case it is evident that in this and in all the following sections of the book treating of the kinds and proofs of knowledge the author is a consistent follower of *Gotama* rather than of *Kaṇâda*, and has attempted with considerable success to incorporate the *Nyâya* doctrine of proofs with the *Vaiśeshika* system of *padârthas.*

Divisons of cognition.

6. Cognition is of two kinds, remembrance and apprehension. Remembrance is defined as the knowledge which is born of a mental impression alone (संस्कार). This संस्कार is that particular kind of it, which is called भावना and which is defined further on (Sect. 75) as being born of apprehension and causing remembrance. So भावनासंस्कार is properly speaking the operation (व्यापार) which comes into existence between the product स्मृति, and its cause अनुभव. व्यापार is defined as तज्जन्यत्वे सति तज्जन्यजनकः, that is, an intermediate operation born of the cause and producing the thing which is the effect of that cause. व्यापार is therefore a sort of intermediate link between the effect and its cause, which often, as in this case of स्मृति, is separated by a great interval of time.

Definition of Smriti.

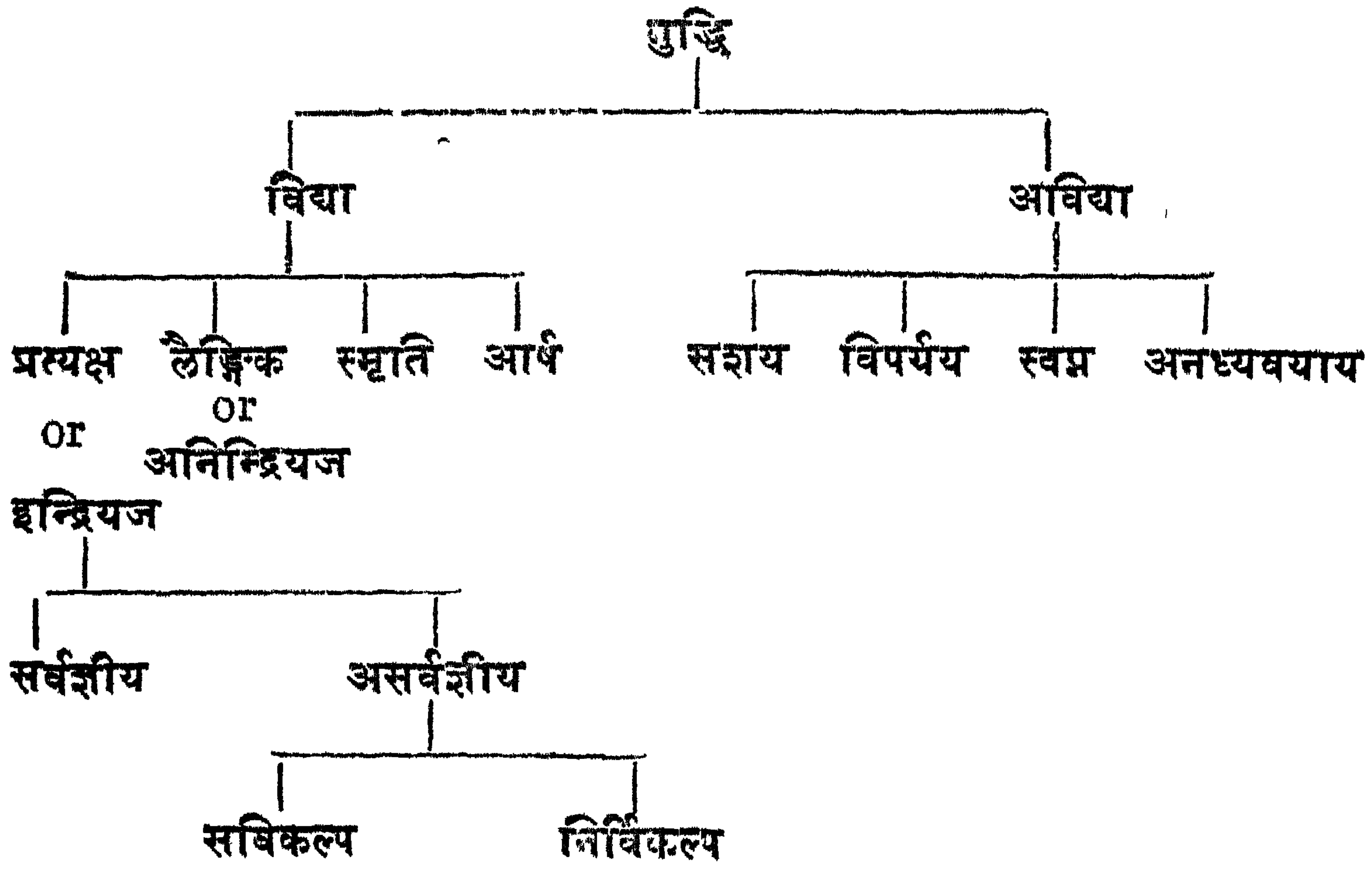
7. The insertion of मात्र in the definition of स्मृति has been sharply criticised, and as strongly defended. The word, it is said, excludes प्रत्यभिज्ञा (reminiscence) which is produced by संस्कार but not by it alone, as a direct perception of the object is also an operating cause in it. The difference between प्रत्यभिज्ञा and स्मृति consists in the presence or absence of the thing recollected. When a man, for instance, who has seen an elephant with a driver on its back, sees either the elephant or the driver alone, he at once remembers the other one, his knowledge is said to be remembrance, and is solely due to the impression that had been left on his mind since he saw the elephant with a driver on its back. The thing, which brings back to the mind the memory of the absent object by the law of association is called the

उद्बोधक (reviver) of that संस्कार. In प्रत्यभिज्ञा (reminiscence) the object recollected is actually before our eyes, and the novelty of the knowledge only consists in the identity of the object now perceived with some one previously seen, as when on seeing देवदत्त one recollects that it is the same देवदत्त whom one saw before. Here the actual perception of देवदत्त is as much the cause of knowledge as the impression left on mind by a former perception; and hence प्रत्यभिज्ञा is not संस्कारमात्रजन्य but प्रत्यक्षसहकृतसंस्कारजन्य. Several copies of T. S. and T. D. omit मात्र in the definition in the text as well as the sentence in T. D. referring to it. S. C. appears to have had both readings before him as he expressly prefers the one with मात्र. Other writers omit मात्र from the definition on the ground that even without it the definition does not cover प्रत्यभिज्ञा, because there the immediate cause of the प्रत्यभिज्ञा is not the previous impression, but the remembrance of the identity of the thing (तत्ता = देवदत्तता) which is produced from संस्कार.* In a remembrance the impression is the immediate cause, while in a reminiscence the impression produces remembrance of identity, and then this remembrance of simple identity produces the reminiscence that that identity resided in the object actually seen. Thus प्रत्यभिज्ञा is not संस्कारजन्य at all, and hence मात्र is unnecessary. *Nīlakaṇṭha* answers this argument by simply remarking that the cause of प्रत्यभिज्ञा is the impression of identity and not an intermediate remembrance. Another objection to the definition is that it is असंभव and will not cover even स्मृति which is not संस्कारमात्रजन्या but अनुभवजन्या also; but the असंभव can be removed either by taking जन्य in the sense of साक्षाज्जन्य or by construing the definition, as *Nīlakaṇṭha* remarks, to mean चक्षुराद्यजन्यत्वे सति (and not संस्काराजन्यत्वे सति) संस्कारजन्यत्वम्. As to संस्कारध्वंस which is also संस्कारमात्रजन्य it is excluded by ज्ञान.

8. The author defines अनुभव as 'all knowledge other than remembrance,' *i. e.* all cognitions which are newly acquired and are not repetitions of former ones. The negative definition of अनुभव in the text is

Apprehension.

due to the fact that अनुभव is a simple ultimate operation of the mind which is at the bottom of all other mental operations, including even the act of defining. Besides, a definition of अनुभव is really unnecessary, as by simply excluding स्मृति or repeated knowledge, the definition of बुद्धि will also serve for the residuum, that is अनुभव. This and the subsequent divisions and sub divisions of बुद्धि are according to the system of *Gotama.* The *Vaiśeshika* division is slightly different and may therefore be profitably compared with that given in the text. *Praśastapàda* divides and subdivides बुद्धि as follows:—*



Of these लैङ्गिक is inference, while आर्ष which is a kind of प्रत्यक्ष is the supernatural perception of Yogins. Others can be easily identified with their corresponding varieties given in the text.

Corresponding English terms

9. The three words बुद्धि, अनुभव and स्मृति are rendered into English by 'cognition,' 'apprehension' and 'remembrance,' because they are their nearest equivalents; but the meanings of the last two require to be clearly defined. Remembrance, recollection, and reminiscence, for instance, are analogous but easily distinguishable. *Remembrance* is an idea which recurs

* P. B. Ben. ed. p. 172. *et. seq,*

to the mind without the operation of an external object on the sensory nerve, and is thus opposed to *perception*; while it becomes *recollection*, if it is sought after and found with difficulty and effort.* स्मृति is *remembrance* as above defined and probably includes recollection also, as *Naiyâyikas* do not seem to make a distinction between a spontaneous and an artificial recollection. *Remembrance* as above defined may seem to be concerned with impressions gained from perception only; but there is no reason why a former inference treasured up in mind or an impression produced from a previous remembrance should not be remembered as well; and hence स्मृति properly speaking is general and comprehends all impressions however originally derived. *Reminiscence* is the act by which we endeavour to recall and re-unite former states of consciousness, and is a kind of reasoning by which we ascend from a present consciousness to a former one. This is akin to प्रत्यभिज्ञा. *Apprehension* is the simple knowledge of a fact, and is an act or condition of the mind in which it receives a notion of any object.† Simple apprehension is again divided into two kinds, *incomplex* and *complex*, which respectively correspond to *Naiyâyika* निर्विकल्पक and सविकल्पकज्ञान. This is not exactly the अनुभव of *Nyâya*, but it is very near it. *Cognition* is knowledge in its widest sense, embracing sensation, perception, conception, and notion. According to Kant, *cognition* is the determined reference of certain representations to an object; that is, to cognize is to refer a perception to an object by means of a conception. A dog *knows* his master, but does not *cognize* him, because it has not the faculty of forming a mental conception of the master. An absent-minded man *sees* an object, but does not *cognize* it because his mind is not working to form a notion of the object.‡ The *Naiyâyikas* expressed this idea by saying that in an अनुभव, the property of the external obiect must become the प्रकार of the corresponding cognition.

SECT. XXXV. अनुभवः

It (apprehension) is twofold: true and false. The true one is the apprehension of a thing having an attribute as possessing that attribute and it is called Pramâ; the false one is the apprehension of a thing not having an attribute as possessing that attribute, e. g. knowledge of silver in a conch-shell.

Apprehension.

1. Apprehension is divided into right (यथार्थ) and wrong (अयथार्थ), the first being usually called प्रमा and the second अप्रमा. यथार्थानुभव is a correct apprehension in which the object is cognized as it is (यथा भूतोऽर्थो यस्मिन् सः). It is defined तद्वति तत्प्रकारकः which may be paraphrased as तद्वद्विशेष्यकस्तत्प्रकारकः, that is apprehension of a certain object possessing an attribute as possessing that attribute.

विशेषण, विशेष्य and प्रकार

2. The words विशेषण, विशेष्य and प्रकार should be carefully noted as they constantly occur in *Nyâya* works. When we see an object, the object becomes the विशेष्य of our knowledge, while the characteristic, which distinguishes that object and makes it what it is, is called the प्रकार of the same knowledge. Thus in the cognition, अयं घटः, घट the object of the cognition is the विशेष्य, while घटत्व the distinguishing property of घट is the प्रकार of the corresponding cognition. Hence the cognition अयं घटः is defined as घटत्ववद्घटविशेष्यक-घटत्वप्रकारक, that is, one which has a jar possessing the attribute jar-ness for its object (विशेष्य), and has घटत्व for its special characteristic (प्रकार). The use of this two-fold terminology is that while the विशेष्य describes the form of the cognition, प्रकार distinguishes it from similar cognitions, as for instance घटज्ञान from पटज्ञान. There is a similar distinction between विशेषण and प्रकार. When we see a नीलघट, the quality of नील becomes a प्रकार of the cognition of the blue jar, while the same quality *blueness* is a विशेषण of the jar itself. Similarly in the cognition अयं घटः, घटत्व is the विशेषण of घट and the प्रकार of घटज्ञान. विशेषण is the property of a material object, while प्रकार is the property of knowledge.

Pramâ and Apramâ.

3. The definition of प्रमा-तद्वति तत्प्रकारकोऽनुभवः—can therefore be paraphrased into घटत्ववद्विशेष्यक-घटत्वप्रकारकोऽनुभवः, which in simple language means that in a right apprehension that

same characteristic which marks the object must also be the distinguishing property of its notion. Hence V. V. remarks सप्तम्यर्थो विशेष्यत्वम्, meaning that the locative तद्वति denotes that the thing (*i. e.* घट) possessing तत् (*i. e.* घटत्व) is the object (विशेष्य) of the apprehension, which has the same तत् for its प्रकार. All this can be briefly expressed by saying that right apprehension is the knowledge of an object as it really exists. The opposite of this is अप्रमा, namely, the cognition of a property (तत्प्रकारकः) in a thing which does not possess that property (अतद्वति). The cognition of silver-*ness* in a thing which *is* silver is प्रमा ; while the same cognition of silver-*ness*, if made in a mother-o'pearl which is *not* silver, becomes अप्रमा. The use of the qualification तद्वति in the definition of प्रमा is made apparent in a combined knowledge of two or more things. Suppose we perceive घट and पट simultaneously and together, but instead of cognizing घट as घट and पट as पट we take घट to be पट and *vice versa*. Here we have a knowledge which has both घट and पट for its objects (विशेष्य) and also घटत्व and पटत्व for its properties (प्रकार) ; but it is not a प्रमा because घटत्व-प्रकार belongs to the part-cognition which is पटविशेष्यक and *vice versa*. Hence the necessity of saying that the knowledge must be तत्प्रकार with reference to the object itself (तद्वति).

4. A very subtle objection to the definition is suggested and answered by T. D. The definition applies to a cognition of घट when we can interpret तद्वति as घटत्वाधिकरणे; but it cannot apply to a cognition of घटत्व itself as residing in a घट, for घटत्व is not the अधिकरण of घट or any other thing ; so the expression तद्वति is meaningless in this case, and the definition will be अव्याप्त. The difficulty can be avoided by taking तद्वति to mean तत्संबंधवति, so that as घट is the अधिकरण of घटत्वसम्बन्ध, so घटत्व is the अधिकरण of घटसम्बन्ध, and the definition comprehends both. Similarly the definition of अप्रमा is too wide as it will apply even to a right cognition, 'This is in union.' For conjunction being a partial (अव्याप्यवृत्ति)

Some objections.

property, the same thing is always संयोगवत् as well as संयोगाभाववत् ; and a cognition इदं संयोगि will be both प्रमा as well as अप्रमा. But this is not so, for in a wrong cognition the knowledge is obtained from a part where there is a negation of संयोग, while in a right cognition the संयोग is known to be on the part having संयोग. Again although a thing resides in another by संयोग and not समवाय, its absolute negation subsisting on the same substratum by समवायसंबंध does not make it a wrong cognition.

All this scholastic subtility does not lessen even a bit the inherent ambiguity of the definitions. The practical difficulty is, which of the many properties of a thing is denoted by तत्, and is therefore to be taken as the test of right apprehension. That they are the घटत्व of घट and पटत्व of पट will of course be the prompt reply ; but do घटत्व and पटत्व, it may be asked, convey any definite ideas apart from घट and पट ? We cannot understand घटत्व or पटत्व unless we first know what घट or पट is. How can then घटत्व or पटत्व become the test of judging the validity of the knowledge of घट or पट ? It is said that we see a घट truly when we observe घटत्व in it, but properly speaking we cannot see घटत्व in the thing unless we have first recognized the thing to be घट. It is not easy to overcome this dilemma.

5. Other philosophers such as the *Sânkhyas* and the *Vedântins* reject the *Nyâya* definitions and define प्रमा as अनधिगताबाधितार्थविषयत्वम्, a cognition having for its object a thing that was not apprehended before and that is never contradicted. अनधिगत excludes स्मृति and may be omitted if the definition is to apply to both right apprehension and right remembrance. स्मृति also, according to *Annambhatta* (see Sect 65 *infra*), is divisible into यथार्थ and अयथार्थ, though its validity depends on other reasons ; but according to some *Naiyâyikas* स्मृति is of one kind only. As to the three kinds of अयथार्थानुभव see Sect. LXIV and notes thereon. There is no reason why the following four divisions of प्रमा should not also be applicable to अयथार्थानुभव. Thus there may be a wrong perceptive knowledge owing to defect of organs and other causes, or a wrong judgment due to fallacious reasoning, or a false analogy, or a misunderstanding of words.

All these, it seems, will fall under the second division of अयथार्थ, namely, विपर्यय, unless of course they have the additional characteristics of संशय and तर्क.

SECT. XXXVI. अनुभवभेदाः

Right apprehension is divided into four kinds: Percept, Judgment, Analogy and Verbal knowledge. The instruments of these are also four, namely: Perception, Inference, Comparison and Word or Language.

Right apprehension is of four kinds.

1. The superiority of Sanskrit terminology is proved here by the fact that except in the case of प्रत्यक्ष the same root supplies two distinct and appropriate names, one for the instrument, and another for the result of knowledge, while in English we are often obliged to employ the same term for both. Even in Sanskrit much confusion often results from the ambiguous use of the word प्रत्यक्ष for both knowledge and its instrument. I have therefore borrowed some new terms from English logic, so as to provide different names for each of these. *Perception* is commonly applied to knowledge, its instrument, as well as the act of knowing; but I have restricted it to the instrument only, or rather the instrument in the act of knowing; while a new term *Percept* is used on the authority of Max-Müller to denote the particular notion acquired by *perception*.* The act of reasoning is denoted by *Inference*, while the conclusion reached is called *Judgment*, which according to Mansel is "a combination of two concepts related to one or more common objects of possible intuition."† उपमिति and उपमान are respectively rendered by *Analogy* and *Comparison*, the latter denoting the act of establishing similarity between two things, while the former implies the similarity so established. There is no appropriate name for शाब्दज्ञान, 'authority' and 'tradition' which are sometimes employed

* Max Müller: *Science of Thought* p. 20.
† Mansel: *Prologom. Log.* p. 60.

meaning quite different things. *Verbal Knowledge* and *Word* are therefore used for शाब्दज्ञान and शब्द respectively.

2. The four varieties of प्रमा as well as their instruments will be defined and explained later; but it will be useful first to examine the general nature of प्रमाण. The aim of *Nyâya* as that of all sciences being the attainment of truth, a knowledge of 'proofs' by which that truth is to be known is necessary, according to the maxim मानाधीना मेयसिद्धिः, 'knowledge of the thing to be measured depends on a knowledge of the measure.' When we have once determined the nature and limits of valid proofs, it is comparatively easy to arrive at true knowledge by employing those proofs properly; or rather the latter function being beyond the province of any art or science may be left to the judgment and capacity of each individual. The greater part of *Nyâya* writings is therefore devoted to a consideration of these proofs, and many controversies have raged respecting them among rival systematists. The number of proofs has varied greatly with different schools from one to nine, and all of them have been equally tenacious in holding to their favourite theories. *Annambhatta* follows *Gotama* in recognizing four proofs,* but the assignment of each to the four divisions of प्रमा respectively seems to be his own improvement. प्रमाण (प्रमीयतेऽनेनेति) is defined in T. D. as प्रमाकरणम्, 'the instrument of right apprehension'; but the definition is rather vague, and inapplicable in those cases where the proofs, though perfectly valid in themselves, lead to wrong knowledge owing to extrinsic causes.

What is Pramâṇa.

3. The definition given by the author is according to some imperfect, as it mentions only one function of a proof, namely, प्रमाजनकत्व (production of प्रमा), and does not comprehend its other function, प्रमात्वज्ञापकत्व (determination of the validity of the प्रमा). Another and a somewhat more accurate definition is साधनाश्रयाव्यतिरिक्तत्वे सति प्रमाव्याप्तम्,† 'proof is that which is always followed by right apprehension (प्रमा),

* G. S. I, 1, 3.

† *Sarv. D. S.* Calc. ed. p. 110.

and is united with the appropriate organ and the receptacle of knowledge, *viz.* soul. Thus proof is first an invariable condition of प्रमा, and not merely the cause of प्रमा. प्रमाण has a double function; it not only produces right apprehension, but sometimes also tests its truth. It is not therefore प्रमाकरण only, but प्रमात्वज्ञापक also; and so the definition प्रमाव्याप्त is more correct as comprehending both. The *Naiyâyikas* are परतःप्रामाण्यवादिनः *i. e.* they hold that the validity of a cognition is proved not by itself, but by some other extraneous means. The objection in their view is not therefore very serious. प्रमाण is neither soul, nor mind, nor the organs of sense, for if it had been so there would have been no necessity of its separate mention apart from these latter which are already enumerated. The *Mîmâmsakas* define प्रमाण as अनधिगतार्थगन्तृ, 'that which apprehends an object not known before;' but this definition, says S. C., is wrong because in a long series of sensations of the same object, the first only thereby becomes प्रमा, while the succeeding sensations will not be प्रमा being अधिगतार्थ. The *Mîmâmsaka's* answer to this objection is that each individual sensation is different from its predecessor in as much as it was produced at a different moment. The expression अनधिगत is intended to prevent भावना-संस्कार being called the proof of स्मृति. The *Naiyâyikas* restrict all proofs to अनुभव or new cognitions and call स्मृति mere repetitions thereof caused by संस्कार from previous impressions.

Intuition and Belief.

4. Before proceeding further, it will be worth while to notice two varieties of knowledge recognized by European logicians, which are apparently left out of *Naiyâyika's* classification of बुद्धि, namely, *intuitions* and *beliefs*. An *intuition* is any knowledge whatsoever, sensuous or intellectual, which is apprehended *immediately*, that is, without the instrumentality of any sense or mental faculty. Axioms in Geometry, and the notions of time, space and causality are such *intuitions*, which do not come under any of the heads of अनुभव of the *Naiyâyikas*. Some of these are accounted for otherwise, as by the recognition of time and space as independent entities which are *inferred* from their effects. The rest will be probably included under स्मृति as reminiscen-

ces of previous births retained by अदृष्ट. The doctrines of अदृष्ट and transmigration enable Indian philosophers to explain many facts that are incomprehensible to Western thinkers. The other kind of knowledge that is apparently left unnoticed is *belief* or *faith*, which differs from *cognition* in that it denotes " those exercises of the mind in which we *believe* in the existence of an object, not now before us and under immediate inspection. "* We often entertain many notions which are not self-evident and yet which we do not know to be positively true. These are beliefs. The *Naiyâyikas*, it seems, would include them, if authoritative, under शाब्दज्ञान, and if not, under अप्रमा. In this way the classification of बुद्धि may claim to be exhaustive.

SECT. XXXVII. करणम्.

An instrument is a cause which is peculiar.

1. A करण is defined as 'a cause which is peculiar.' According to V. V., S. C. and *Nîlakaṇṭha*, असाधारण is inserted to exclude general causes such as time and space; but this does not seem to be the sole purpose of the word. The word must also be intended to exclude other causes, such as the intimate and the non-intimate causes of a thing, which are neither universal nor करण. असाधारण is better paraphrased by *Nîlakaṇṭha* as यद्विलम्बात्प्रकृतकार्यानुत्पादस्तत्कारणत्वम्, that is, 'a cause without which a desired effect will never be produced;' but this also is not strictly accurate. A करण properly speaking is the immediate or proximate cause that gathers together the scattered materials and gives final shape to the product. It is the cause which, other accessories being present, is absolutely necessary for the completion of the effect. This seems to be the meaning of असाधारण here, which considerably differs from the sense in which it is used in other passages.† But even so much restriction is not sufficient to

Proximate Cause.

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* M'Cosh: *Intuitions* p. 196.

† See Sec. 29, and the reading of several copies in Secs. 24-5-6-7.

ensure perfect accuracy in the definition of करण. For example, दण्ड is an असाधारण निमित्तकरण of घट and is therefore its करण; but a दण्ड in a forest can never be the करण of a घट, although the definition would equally apply to it, as it is potentially if not actually an efficient cause of घट. To exclude दण्ड in the forest, the ancient *Naiyâyikas* inserted an additional qualification व्यापारवत्त्वे सति, so that only a दण्ड, which is actually employed in the act of producing a jar, is its करण, while a दण्ड in the forest having no व्यापार is excluded. व्यापार is defined by S. C. as द्रव्येतरत्वे सति तज्जन्यत्वे सति तज्जन्यजनकः, that is, 'an operation which, not being a द्रव्य, is the product of a thing (तत्), and produces the effect of that thing. When an axe lops off a tree, the axe is the करण, the cutting is the final product, and the contact of the axe with the wood is the व्यापार, because it is produced from the axe and produces the cutting. The words द्रव्येतरत्वे सति are inserted in the definition of व्यापार to prevent an intermediate product (मध्यमावयविन्), such as a कपाल, being व्यापार, although it is produced from atoms and produces the jar. So the complete definition of a करण according to the ancient view is व्यापारवद्साधारणं कारणम् *i. e.* 'a peculiar and operative cause.'

The modern view.

2. This has given rise to an important controversy between the ancients and the moderns. The latter disapprove of the ancient definition of करण above given and propose one of their own फलायोगव्यवच्छिन्नं कारणम्, *i. e.* 'a cause which is invariably and immediately followed by the product. This of course excludes दण्ड in the forest as well as all universal and special causes, which are not necessarily and immediately followed by the effect. The difference between the two views is not merely verbal but fundamental, for quite different things are designated करण according as we accept either of the definitions. The definition of the ancients requires the करण to be व्यापारवत्; and therefore strictly speak-

ing it must always be a substance in which actions and qualities that constitute a व्यापार may inhere; while according to moderns it is this व्यापार itself which becomes the करण as it is even more proximate to the effect than the material करण of the ancients. When an object for instance is visible the organ of sight comes into contact with the object. This contact (इन्द्रियसन्निकर्ष) is the व्यापार, and the organ of sight would be the करण in the act of perception according to the ancients; while the moderns would call the सन्निकर्ष itself the करण, as the फल (percept) immediately follows from it, but is not necessarily produced from इन्द्रिय. In an inference the ancients are rather inconsistent in calling लिङ्गज्ञान or व्याप्तिज्ञान the करण of अनुमिति; since, being a cognition *i. e.* a *guṇa*, the ज्ञान cannot properly speaking possess a व्यापार which is either *guṇa* or *karma* and as such can inhere in a substance alone. In अनुमिति the परामर्श is called the व्यापार by the ancients, and the करण by the moderns. Another inconsistancy of the ancient view is that on the analogy of प्रत्यक्ष there is no reason why mind should not be the करण of अनुमिति instead of व्याप्ति; and mind being also the करण of सुखादिप्रत्यक्ष, अनुमिति and मानसप्रत्यक्ष would be confounded. These are some of the reasons which make the moderns reject the definition व्यापारवत् and define a करण as simply फलायोगव्यवच्छिन्नम् or more briefly फलव्याप्तम्, that is, one which is invariably associated with the फल. This difference of definitions results in the important distinction of the व्यापार of the ancients becoming the करण of the moderns; while the करण of the ancients merges, according to the modern view, into the general category of simple causes.

Origin of the difference.

3. (The original notion of a करण seems to be that conveyed in *Keśava Miśra's* definition साधकतमं कारणं, which is explained as प्रकृष्टं कारणं, a cause *par excellence*.*) Many causes contribute to produce an effect but some of them are related to the effect more closely than others. Of two murderers one

* T. B. Bom. ed. p. 10.

who strikes the blow has certainly a greater share in the murder than the other who simply holds the victim. Some causes are most active and also most essential in production, while others simply aid it. The horse which draws the carriage is certainly more efficient than the wheels which only facilitate motion by lessening friction. These are causes pre-eminently so called, and are distinguished from other causes by the special name करण. The प्रकर्ष, pre-eminence of the करण, is therefore said to consist in its activity or efficiency (व्यापारवत्त्व). Hence a करण came to be defined as व्यापारवत्कारणं. But here comes another difficulty. The definition व्यापारवत् is obviously inaccurate since it applies to an agent also who is by far the most active in the production, but who is not called a करण. Somehow or other the notion of an *instrument* or *means* is involved in that of करण, and the agent therefore ought to be excluded. Hence in discussing the definition of प्रमाण as प्रमाकरण, *Keśava Miśra* remarks सत्यपि प्रमातरि प्रमेयेच प्रमानुत्पत्तेरिन्द्रियसंयोगादौ तु सत्यविलम्बेनैव प्रमोत्पत्तेरिन्द्रियसंयोगादिरेव करणम्,* that is, अविलम्बेन कार्योत्पात्ति (immediate production) constitutes the प्रकर्ष of a करण, and this is found only in the case of इन्द्रियसंनिकर्ष. Other efficient causes, such as the knower and the object of knowledge are not called करण even though they may be व्यापारवत् because the result is not produced even if they exist. This restriction of करण necessarily led to the abandonment of व्यापारवत्त्व, and the substitution instead of अविलम्बेन कार्योत्पादकत्व, or more accurately फलायोगव्यवच्छिन्नत्व, as a definition of करण. But this farther restriction went too far, as it exclued organs of sense, and in fact all instruments from the class of करण. The moderns boldly accepted this as an इष्टापत्ति, but the ancients could not assent to it as the idea of करण was inextricably involved in their mind with the notion of an instrument. They therefore satisfied themselves by retaining व्यापारवत्त्व and excluding the agent expressly by inserting in the definition of प्रमाण some such limitation as अनुभवत्वव्याप्यजात्यवच्छिन्नकार्यतानिरूपितकारणताश्रयत्वे सति. आत्मा or प्रमाता is ex-

* T. B. Bom. ed. p. 26.

cluded because he is the आश्रयकारणता (*i. e.* the cause) of many other effects besides a प्रमा which is a species of अनुभव (अनु—जाति). This is the gist of the controversy about करण, which has furiously raged between the ancient and modern *Naiyâyikas*.

Author's view.

4. The two views being thus distinct, the question naturally occurs which of them is adopted by *Annambhatta*. Before answering this question, it is necessary to discuss the reading व्यापारवदसाधारणं कारणं करणम्, which occurs in most of the copies of the text, but which has been for various reasons rejected in this edition. Although व्यापारवत् is necessary to complete the definition, it is almost certain that the word did not exist there originally. The *Pratîkas* in T. D., N. B., S. C. and *Nil.* prove that the definition began with असाधारण; while the fact that both S. C. and *Nil.* expressly quote व्यापारवत्कारणम् as an ancient substitute for असाधारणं कारणम् shows that in their opinion at least व्यापारवत् did not form part of *Annambhatta's* definition. Besides if it had been there the author ought to have defined व्यापार and explained the propriety of व्यापारवत् either in the text or in the commentary, which he does not do. One Ms. no doubt inserts the words तज्जन्यत्वे सति तज्जन्यजनको व्यापारः after the definition of करण in the text; but the addition is clearly spurious; and the readings of N and Y are equally unauthenticated. In Sect. 41 again, the author repeats that असाधारणकारण alone is करण without mentioning व्यापारवत्, while in Sect. 47 he calls लिङ्गपरामर्श itself the करण of अनुमिति, although it cannot be so according to the definition व्यापारवत्. But as if not wishing to leave the point in any doubt, the author himself, in the *Dîpikâ* on Sect. 47, quotes व्यापारवत्कारणं as a distinct view which he disapproves, remarking emphatically लाघवेन सर्वत्र परामर्शस्यैव करणत्वात्. On the other hand, at the end of Sect. 43 he as emphatically declares इन्द्रिय to be the करण of प्रत्यक्ष which can only be true if we accept the ancient definition. Similarly he calls सादृश्यज्ञान the करण of उपमिति, and mentions

A reading discussed

अतिदेशवाक्यार्थस्मरण as a distinct व्यापार. In the case of शाब्दज्ञान again he seems inclined to prefer the modern doctrine.

5. The question therefore which view was accepted by *Annambhaṭṭa* must still remain involved in doubt. Probably he had formed no decisive opinion on the point, and was wavering between the two conflicting views. That there is a clear inconsistency between his calling on the one hand इन्द्रिय and सादृश्यज्ञान the करण of प्रत्यक्ष and उपमिति respectively and on the other his preference for परामर्श as the करण of अनुमिति is undeniable; but it is hard to believe as some have supposed, that such a glaring inconsistency was due to an oversight of the author. Most probably he was fully conscious of it, and accepted it as inevitable in an elementary treatise like the present, which, being intended for beginners, preserved as much consistency and accuracy as was compatible with simplicity and clearness. If he had accepted either of the two views *in toto*, he must necessarily have launched into the controversy as to the comparative merits of the rival views, which from its subtility and intricacy is quite beyond the capacity of beginners. He followed the ancient view in प्रत्यक्ष and उपमिति, because it was more easily comprehensible by beginners, while by accepting परामर्श to be the करण of अनुमिति, he certainly made his treatment of inference simpler, more rational and more methodical. Thus practical expediency rather than theoretical consistency seems to have weighed with the author in his accepting different doctrines in different places. That he purposely did this seems evident from his employment of such a vague word as असाधारण in the definition of करण and the total absence of any allusion to व्यापारवत् either in the text or in the commentary of the present section. This omission must have been deliberate, for the controversy about व्यापारवत् had raged furiously, and was too important to be passed over through inadvertancy by such a careful writer as *Annambhaṭṭa*. The conclusion seems irresistible that he purposely used an ambiguous word like असाधारण which might apply to either of the two views of करण.

SECT. XXXVIII. कारणम्.

A cause is one that invariably precedes the effect.

1. The definition of करण having referred to a कारण, the latter is now defined as 'one that invariably (नियत) precedes (पूर्ववृत्ति) its effect (कार्य).' That a cause must precede its effect is evident, for otherwise it will not be a cause. T. D. remarks that पूर्ववृत्ति is inserted to exclude कार्य itself. But all antecedent things are not necessarily causes. The potter's ass that carries the earth of which jars are made, precedes the jar, but it is not an invariable antecedent, for earth can be brought in hand or in a cart, and so the jars can be made without the aid of the ass. Hence the word नियत is inserted to exclude all but invariable antecedents.

Cause.

2. The definition in the text is not however sufficiently accurate, and hence T. D. adds another qualification अनन्यथासिद्धत्वे सति, which means "provided the antecedent thing is not connected with the effect too remotely." The father of the potter for instance invariably precedes the jar, for without him the potter would not be born, and without the potter there could be no jar; but the potter's father and all his ancestors are not causes of the jar. Again while दण्ड is the cause of the jar, the दण्डरूप is not, although it is as much an invariable antecedent as the दण्ड itself. To exclude these the limitation अनन्यथासिद्ध is added, so that all things, which though invariably preceding are not immediately connected with the effect, are excluded. S. C. paraphrases the definition as कार्यान्नियता (अवश्यंभाविनी) पूर्ववृत्तिः (पूर्वक्षणवृत्तिः) यस्य तत्तथा· नियतपूर्ववृत्तित्व is explained as अव्यवहितपूर्वकालावच्छेदेन कार्यदेशे सत्त्वम्, *i. e.* "existence in the same place as the effect at the moment immediately preceding its production." This will exclude the ass, the potter's father and even the अरण्यस्थ दण्ड if necessary; but दण्डरूप and दण्डत्वजाति would still come in, and can be excluded only by a separate qualification such as अनन्यथासिद्ध. Accordingly V. V. sums up the complete definition of कारण as नियतान्य-

थासिद्धभिन्नत्वे सति कार्याव्यवहितपूर्वक्षणावच्छिन्न-कार्याधिकरणदेशनिरूपिताधेयतावद्-भाव-प्रतियोगितानवच्छेदकधर्मवत् कारणम्. The whole of this long and terribly involved expression means nothing more than that a cause must be invariable (नियत), must not be too remote (अन्यथासिद्धभिन्न) and must not be the counter-entity (प्रतियोगितानवच्छेदकधर्मवत्) of a negation (अभाव) that resides in the place of the effect (कार्याधिकरणदेशनिरूपिताधेयतावत्) at the moment immediately preceding production (कार्याव्यवहितपूर्वक्षणावच्छिन्न). All these circumlocutions have no doubt their use in the *Nyâya* system, but the whole definition does not after all amount to much more than Mill's definition of a cause as 'an unconditional and invariable antecedent'.

A Reading discussed.

3. The word अनन्यथासिद्ध being thus necessary to complete the definition of कारण, it may be asked why it is omitted in the text of this edition, especially when it is found in almost all copies. The reasons for dropping अनन्यथासिद्ध from the text are not indeed as strong as those for omitting व्यापारवत् from the preceding definition, but they are sufficiently cogent to warrant the guess that the word did not originally exist in the text but was probably added afterwards by the *Dîpikâ*. The reading in the text is taken from four authentic Mss. as being what the author probably wrote at first. Five copies prefix अनन्यथासिद्ध to the definition, while two others read अनन्यथासिद्धत्वे सति and कार्ये अन्यथासिद्धिशून्यत्वे सति respectively before नियत etc. In J, the oldest of the Mss. available, the word is absent in the body but is added in the margin by a later corrector. V. V. and S. C. appear to take अनन्यथासिद्ध as part of the definition; but N. B. is evidently of the contrary opinion, its remark अतोऽनन्यथासिद्धमपि पदं कारणलक्षणे निवेशनीयम् showing that it did not find the words in the original. Any doubts on the point however should be removed by the प्रतीक in T. D. which is the same in all copies and which shows that the definition began with the word कार्य. Besides the wording of T. D. अनन्यथासिद्धत्वे सतीति विशेषणात् also implies that the words were added by the commentary and did not

stand in the text at first. The different readings of E and H also bear a very close and therefore suspicious resemblance to the remark in T. D., and suggest the inference that they were inserted into the text from T. D. by some later copyist to supply the imperfection of the original definition. It may therefore be presumed that the word अनन्यथासिद्ध was at first left out of the definition of कारण, either inadvertently or purposely as being too obscure for the easy comprehension of beginners, and the omission was supplied by the author himself in the *Dîpikâ* which is evidently intended for advanced scholars. Later copyists however, who could not bear to see the definition in a standard book being so palpably imperfect, tried to supply the omission from the commentary and supplied it differently.

Propriety of the qualification.

4. अनन्यथासिद्ध is the opposite of अन्यथासिद्ध, which means 'proved to be antecedent through another,' that is, a thing the antecedence of which is due to the antecedence of another thing to the effect. Roer translates the word अन्यथासिद्ध by 'superfluous causality,' probably on the authority of some writers who explain अन्यथासिद्ध as denoting a cause which is not necessary for the production of, effect.* But this view is wrong as will appear from the following quotation from S. C., which, after explaining अन्यथासिद्ध as अवश्यक्लृप्तनियतपूर्ववर्तिन एव कार्यसंभवे तत्सहभूतम्, remarks "केचित्तु अन्यत्रक्लृप्तनियतपूर्ववर्तिन एव कार्यसंभवे तद्भिन्नमन्यथासिद्धं यथा रूपप्रागभावशून्यस्थले क्लृप्तनियतपूर्ववर्तिनो गंधप्रागभावादेव पाकजस्थलेऽपि गंधरूपकार्यसंभवे तद्भिन्नो रूपप्रागभावो गंधप्रागभावेनान्यथासिद्ध इति वदन्ति, तदसत्। दण्डत्वादेरन्यथासिद्धत्वानापत्तेः." The argument of S. C. is that अन्यथासिद्ध is not merely a cause that is unnecessary for production, but everything that accompanies a necessary antecedent; otherwise दण्डत्वजाति will not be अन्यथासिद्ध as it is quite necessary for

* Roer's trans. of B. P. *Bibl. In.* p. 10.

the production of a jar, because without दण्डत्व there will be no दण्ड and consequently no घट also. Roer's rendering is therefore incorrect and the word really means 'a thing which is proved to be antecedent (cause) to the effect, through another or because it accompanies another,' that is, a secondary cause deriving its character through the primary and real cause.

5. T. D. mentions three varieties of these 'secondary antecedents,' which *Annambhatta*, says *Nîlakantha*, borrowed from *Gangeśa*, the author of *Tattva-Chintâmaṇi* *viz*:— (1) first, the things that are connected by समवायसंबंध with कारण, and are therefore antecedent to effect through it, as for instance the तन्तुरूप and तन्तुत्व, which, being intimately united with तन्तु, are antecedent to its effect पट; (2) secondly, the things that are antecedent to कारण, and are therefore *a fortiori* antecedent to the effect, such as the potter's father who being anterior to the potter must be antecedent to the jar also, or as ether which is antecedent to a jar, because it is the intimate cause of the word घट that always precedes the thing घट; (3) and thirdly, all other concomitants of कारण that are not connected with it by समवाय, such as रूपप्रागभाव which is not the cause of गन्ध, although in a baking jar or a ripening mango it co-exists with गन्धप्रागभाव which is the real cause of गन्ध. This classification does not claim to be exhaustive, and in fact, the first two classes are obviously included in the last.

6. Others mention *five* varieties of अन्यथासिद्ध which are thus summed up by *Viśvanâtha*:—

येन सह पूर्वभावः (1) कारणमादाय वा यस्य (2) ।
अन्यं प्रति पूर्वभावे ज्ञाते यत्पूर्वभावविज्ञानम् (3) ॥
जनकं प्रति पूर्ववर्तितामपरिज्ञाय न यस्य गृह्यते (4) ।
अतिरिक्तमथापि यद्भवेन्नियतावश्यकपूर्वभाविनः (5) ॥

And these are illustrated thus:—

एते पञ्चान्यथासिद्धा दण्डत्वादिकमादिमम् ।

घटादौ दण्डरूपादि द्वितीयमपि दर्शितम् ॥
तृतीयन्तु भवेद्व्योम कुलालजनकोऽपरः ।
पञ्चमो रासभादिः स्यादेतेष्वावश्यकस्त्वसौ* ॥

Of these the first two correspond to the first class of *Annambhatta*, the third and fourth to his second class, and the fifth to his third. The splitting of the first two varieties mentioned in T. D. is based on minute distinctions between the illustrations which are of no special importance. अन्यथासिद्ध being thus described and its need to complete the definition being proved, an objection may be made to the retention of the word नियत in the definition of कारण as its purpose is served by the last kind of अन्यथासिद्धि, the instance रासभ coming under that head. नियत is not however useless, for, though an individual ass may be अन्यथासिद्ध as regards a particular घट, रासभत्व in general is not so with respect to घटत्व, and hence नियत is necessary to exclude it. It may also be pointed out that the word अन्यथासिद्ध is too vague and general, and नियत helps to make its meaning more definite.

SECT. XXXIX. कार्यम्.

Effect is the counter-entity of antecedent negation.

1. As the definition of cause is framed in terms of the effect, we cannot fully understand it unless we know what effect is. Effect is therefore defined as a thing that is the counter-entity of (its) anterior negation; in other words an effect is that which has a beginning. प्रागभाव will be subsequently explained as the negation of a thing before it comes into existence; and so, to say that an effect has a प्रागभाव is tantamount to saying that it has a beginning (आदि) and is not eternal. Eternity may however be limited on both sides, past and future, of which past non-eternity alone corresponds to कार्यत्व. Both प्रागभाव and ध्वंस are non-eternal, but ध्वंस having a beginning but no end is कार्य,

Effect.

while प्रागभाव having an end but no beginning is not कार्य. Hence कार्य is defined as the प्रतियोगि (contradictory) of प्रागभाव. प्रागभाव is not a कार्य, as it cannot be a प्रतियोगि of itself.

What is a Pratiyogin.

2. Now what is a प्रतियोगि? The idea of a प्रतियोगि is one of those conceptions which are more easy to understand than to define; and consequently various definitions of प्रतियोगिता are given according to the standpoints from which the writers view it. प्रतियोगिता is no doubt a relation; but how can there be any relation between existence (भाव) and non-existense, between a thing and *no-thing*? अभाव however is an independent entity according to *Nyâya*; and hence this relation is possible. Besides प्रतियोगिता is not an objective connection between two external things; it is truly speaking a purely subjective relation existing between the subjecive notions of those things. Though the things may be non-existent and immaterial, their notions are real enough to allow a relation between them. Thus an अभाव may be pure negation, but the notion of अभाव is positive and really exists in the mind; and it must therefore have some external object to which it corresponds. अभाव itself cannot be this object because it has no positive existence; and hence this object by which the notion of अभाव is produced and is to be explained must be found among the six positive *padârthas*. That भावपदार्थ therefore by which a particular notion of अभाव is explained is called the प्रतियोगि of that अभाव. A घट is thus called the प्रतियोगि of घटाभाव, and पट of पटाभाव, because the notions of those two negations depend for their existence on the prior knowledge of घट and पट respectively. This is one kind of प्रतियोगितासंबंध, and is called विरुद्धत्व (opposition). Another kind is called निरूपकत्व and exists between a thing and its attribute, or rather between two objects and the relation between them, as for instance, when we say that a face is like the moon, moon is the प्रतियोगि of the सादृश्यसम्बन्ध residing in मुख. In this case

also the notion of सादृश्य depends on the prior knowledge of the moon, but this प्रतियोगिता differs from the former in having a corresponding external object. The first प्रतियोगिता is a relation between two things of which one exists and the other does not, while the second lies between things which are both positive and existing. The first may be called contrariety as that between घट and घटाभाव; the second co-existence as that between moon and its attribute the सादृश्य, meaning of course those qualities which it has in common with मुख. Similarly the thing in relation to which this प्रतियोगिता is spoken of is called the अनुयोगि of the relation. Thus मुख of which the likeness to the moon is predicated is the अनुयोगि of the सादृश्य; while the भूतल of which घटाभाव is likewise predicated is called the अनुयोगि of that अभाव. Now घट is प्रतियोगि of घटप्रागभाव; and पट of पटप्रागभाव; so कार्य in general is the प्रतियोगि of the प्रागभाव of all products, that is of प्रागभाव in general.

The theory of Causality.

3. The definition of कार्य given in the text involves a very important principle which is one of the cardinal doctrines of *Nyâya* philosophy, and which, as having been the subject of bitter controversy, requires some notice. The doctrine is that an effect is non-existent before production, and is quite distinct from its cause. This apparently simple doctrine, involving as it does many wider issues, sharply divides the *Nyâya—Vaiśeshika* from other schools of philosophy, and is as a matter of fact the keystone of its realistic philosophy. There are four principal theories of causation accepted by different Indian philosophers, which are thus summed up by *Mâdhavâchârya*.— " इह कार्यकारणभावे चतुर्धा विप्रतिपत्तिः प्रसरति । असतः सज्जायत इति सौगताः सङ्गिरन्ते । नैयायिकादयः सतोऽसज्जायत इति । वेदान्तिनः सतो विवर्तः कार्यजातं न तु वस्तु सदिति । साङ्ख्याः पुनः सतः सज्जायत इति* ।

While the *Bauddhas* hold that a real effect is produced from an unreal cause, that is, from absolute non-existence, the *Vedântins* maintain the opposite view of the reality of the cause and the total unreality of effect. The *Naiyâyikas* and *Sânkhyas* accept the reality of both cause and effect, but while the latter hold both of them to be always and simultaneously existing, the *Naiyâyikas* consider the effect to be non-existing before creation. In the *Baudha* system, creation is the production of a *thing* out of *nothing*; in *Nyâya* it is the production of a *new* thing out of an old one; in *Sânkhya* it is merely the evolution of the latent properties of the cause itself; in *Vedânta* it is a mental conception only, and corresponds to no actual change in the cause itself.

Realism and idealism.

4. The *Bauddha* view is opposed to the celebrated Aristotelian maxim *Ex nihilo nihil fit*, and has been severely criticised by all orthodox schools,* while the third, *viz*. the *Vedântic* view being involved in the general doctrine of *Mâyâ* stands by itself. The bitterest controversy has raged between the *Sânkhyas* and the *Naiyâyikas*, as regards their particular views, namely, the सत्कार्यवाद् and the असत्कार्यवाद् as they are respectively called. The *Nyâya* view is admirably summed up in *Annambhaṭṭa's* definition of कार्य, that an effect being the प्रतियोगि of प्रागभाव in general is totally non-existent before creation.

5. The सत्कार्यवाद् of the *Sânkhyas* as well as the arguments by which it is supported are thus summarized in *Iśvarakṛishṇa's* tenth *Kârikâ* :—

> असद्करणात्, उपादानग्रहणात्, सर्वसम्भवाभावात् ।,
> शक्तस्य शक्यकरणात्, कारणभावाच्च, सत्कार्यम् ॥†

Five reasons are given for rejecting the *Nyâya* doctrine of non-existent effect, and holding that the effect does exist latently in the cause even before creation. First, that which

does not exist can never be created, for a blue colour cannot be changed into yellow even by a thousand artizans. Secondly, the material cause is always found associated with the effect, as sesamum with oil; and as there can be no association with a non-existing thing the effect must be existing in its cause. Thirdly, if it be said that a cause might produce an effect even though totally unconnected, anything can be produced from anything for there will be no reason to determine that a particular effect shall be produced from a particular cause only; while as a matter of fact we find this to be actually the case, and hence the effect must be pre-existing in the cause. Fourthly, if it be maintained that an unconnected cause produces the effect owing to some inherent faculty in itself, is this power or faculty, it may be asked, connected in any way with the effect? If it is, then it is as much as saying that the effect pre-exists in the cause; while if it is not, the previous difficulty recurs as to how a particular effect only is produced from the power. Lastly, as cause and effect are of the same nature, one cannot be always existing while the other is non-existent. Both of them ought therefore to co-exist. All these arguments can be summed up in one objection against the *Nyâya* doctrine that if the effect is totally distinct from the cause there can be found no determining principle to establish the relation of causality between the two things, and the doctrine will approximate to the *Bauddha* view that the effect is produced from nothing. This may be the reason why the followers of *Nyâya-Vaiśeshika* are often taunted as being अर्धवैनाशिक (Semi-Buddhists) by their orthodox opponents. And as the *Bauddha* doctrine is opposed to nature, *Nyâya* theory also must be rejected as having the same tendency.

6. The chief argument by which the *Naiyâyikas* defend their view is that unless effect is supposed to be quite distinct from its cause we cannot account for the obvious difference between the two. A घट must be something different from its constituent parts, for otherwise it would

not be घट at all. The same atoms can be used to make a jar and a saucer; and if cause and effect are not distinct, both घट and शराव will be identical with the atoms, and therefore will be identical with each other according to the axiom that things equal to the same thing are equal to one another. But a घट is certainly not a शराव, for it has a certain form or shape (कम्बुग्रीवादिमत्त्व) which is not found in the latter. The *Vedântins* who hold सत्कार्यवाद avoid this difficulty by denying the axiom itself. Again the particular shape (कम्बुग्रीवादिमत्त्व of a jar, or आतानवितानवत्तन्तुमत्त्व of a piece of cloth,) is not found in the parts either separately or collectively. Whence does it come then? It cannot be said that it does exist latently in the cause, and that production is nothing but its manifestation; for this manifestation itself, being an effect, must itself have existed previously. The आकारविशेष and all other properties which distinguish a घट from its parts must therefore have been newly produced. As the *Nyâya* theory of असत्कार्य has a tendency to the Buddhistic nihilism (शून्यवाद), the *Sânkhya* doctrine of सत्कार्य or परिणाम ultimately merges into the pantheism (विवर्त or मायावाद) of the *Vedântins*. If an effect is materially indistinct from the cause, its special properties must be real or unreal. If real, they must have been newly produced (as the *Naiyâyikas* say), or only manifested; in the latter case their manifestation will require another manifestation, and so on *ad infinitum*. If the properties are unreal, they can be only notional, and attributed to the effect by a subjective error (अध्यास), which is the doctrine of विवर्त. Thus the controversy ends practically in a draw, and the problem remains insoluble.

7. A little consideration will suffice to show that the असत्कार्यवाद is the basis of Realism, while सत्कार्यवाद inevitably leads to all sorts of Ideal and Pantheistic theories. All the important conceptions of *Nyâya*, such as those of atoms, God, souls, *Samavâya*, *Viśesha* and *Abhâva* will be found, if properly analyzed, to depend ultimately on this fundamental doctrine of non-existent effect, and it was therefore to be wished that the author had said somethi[illegible] in the

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text. But he probably avoided all reference to it, as being too intricate and controversial for beginners. A student however can never clearly understand the *Nyâya-Vaiśeshika* systems, unless, he has thoroughly grasped their peculiar view of causality.

The instrumental and non-intimate causes

8. It is of course needless to point out that the cause over which this controversy has arisen is the material cause, or उपादान as it is generally called. As to the instrumental causes there is no difference of opinion, while the non-intimate cause is not recognized by any systematist except the *Naiyâyikas*. This last is an arbitrary assumption necessitated by the *Nyâya* theory of causation and is inseparable from it.

The controversy about causation.

9. The recognition of a non-intimate cause has made the *Naiyâyikas* liable to a severe attack by their usual opponents, the *Mîmâmsakas* who advocate सत्कार्यवाद. The arguments on both sides of this controversy are so strong and cogent and yet so irreconcilable, that one is inevitably led to suspect that, as both cannot be right, both of them must be wrong. It is not easy to find out where their error lies, but the fact that so much philosophical subtility should have been spent without advancing a single step naturally suggests the inference that they must have misunderstood the question altogether, or must have been seeking for the true solution in a wrong direction. This is partially true, but partially only, for as a matter of fact the difficulty of getting a right solution is to a considerable extent inherent in the subject itself. The chief cause of the error of these Indian schoolmen appears to be their want of a true Inductive method by which alone the true notion of causality could be attained. Instead of determining the nature of causation as it is actually found in the world outside, they started from a limited experience and began to analyze their own *a priori* notions of cause and effect. Of course this

deductive reasoning they carried to perfection, but it could not avail them very far. The result has been that though the subsequent speculations are good specimens of correct logic, the preliminary notions on which they are based remain crude and often groundless. Thus, while the definition of a कारण is guarded on all sides from the usual three faults of a definition by carefully chosen qualifications, no attempt is made to explain the fundamental notions involved in it.

10. A cause for instance is said to be that which is not अन्यथासिद्ध. But what is अन्यथासिद्ध? No accurate and comprehensive definition of the word is given, and the classification too is merely illustative and not exhaustive; so that we are ultimately left to our own unaided intuition to discover whether a particular thing is a true cause or is अन्यथासिद्ध. The potter's father is declared to be अन्यथासिद्ध, but what about the potter himself? The doer or agent is nowhere expressly mentioned as a cause; the potter therefore must be either the निमित्तकारण of घट like a दण्ड, or must be अन्यथासिद्ध. An intelligent agent is required to set the particles in motion, and as the motion is the immediate cause of the product, the agent may in one sense be said to become अन्यथासिद्ध by this intervention of the motion. But the agent is commonly received as a cause, and oftentimes the most important cause. He is in fact the most indispensable cause; and yet, strange as it may seem, he is classed along with inanimate and often optional means such as दण्ड and चक्र. The difference between an intelligent agent and other causes does not seem to have weighed much with the *Naiyâyikas*.

Agent.

11. Again the distinction between material and instrumental causes is not made quite clear. A jar is made of particles of earth that are held together by water by means of a peculiar property in it named स्नेह. Is this water an उपादान or a निमित्तकारण only? Properly speaking it should be the first, for it

The material and instrumental causes

is inseparable from the jar. The jar will weigh something over and above the particles of earth composing it, and the excess is unquestionably the weight of the water. The water should therefore be as much a समवायिकारण as the earth; and yet the *Naiyâyikas* appear to include it among instrumental causes. Similarly in every product formed by the combination of several ingredients it is absurd to call one material and the others instrumental causes only; but the *Naiyâyikas* nowhere recognize the possibility of several intimate causes forming one product. Perhaps they may silently acquiesce in it; but the fact is positively irreconcilable with the rival theory of सत्कार्यवाद. According to this latter doctrine, the jar must before creation be latent in both its material causes, namely earth and water; but how is this possible, when the two ingredients might have perhaps been separated by hundreds of miles. The earth of the Himalayas and the water of the Ganges might go to form a jar which could not have certainly existed at one time in both those places. If this is the case with mechanical mixtures, much greater difficulties will occur in what we now call chemical combinations where the properties of the constituents and oftentimes the constituents themselves are either disguised or completely transformed in the process of production.

Where the error lies.

12. The above-mentioned objections are after all superficial and can be removed by speculative artifices. But there are others which lie deeper, and which strike at the very foundation of both the rival theories. The common assumptions which seem to underlie these theories is that every effect has one cause and that there is invariable concomitance between the two; but this is not warranted by experience. The disturbing influence of what Mill calls Plurality of causes and intermixture of effects, has been totally ignored by Indian systematists, and consequently their theories have often been at marked variance with observed phenomena. The same effect may be produced from several alternative causes, while the same number of ingredients differently

combined might produce totally different products. Heat for instance may be produced either by friction or by electricity; and therefore neither can be the cause of heat according to the *Nyâya* definition of a cause, as neither is invariably (नियत) antecedent (पूर्ववृत्ति) to the कार्य. Perhaps the *Naiyâyika* will include both friction and electricity among efficient causes which may be optional, or he will call them अन्यथासिद्ध, the vibrations of particles by either being the real proximate cause of heat; but that will not improve his position very much. Besides while the two controversialists have confined themselves to material causes they have not given much attention to the efficient ones which are generally as important as, if not often more so than, the material causes. The controversy has been in fact carried on more on speculative than on practical grounds; and consequently the result also has been barren. Bacon's strong condemnation of the schoolmen of medæival Europe applies in a great measure to their prototypes, the Indian systematists.

13. The real difficulty of the solution lies in the metaphysical conception of causality, which when analyzed resolves itself into mere sequence of things or successive events. Kant's explanation of the insolubility of this problem is that the conception of causation is intuitive like those of time and space, and cannot be proved by reasoning as it is anterior to and is itself in fact the basis of all process of reasoning. The *Vedântins* alone of all Indian systematists appear to have sufficiently grasped this idea of causality, and have expressed it in their own way by calling कार्यत्व, an आरोपित or अध्यस्तधर्म. The realism of the *Naiyâyikas* prevents them from accepting any such view.

SECT. XL. कारणानि

The three Causes

Cause is of three kinds, 'intimate,' 'non-intimate' and 'instrumental' or 'efficient.' The intimate cause is 'that in inseparable union with which the effect is produced,' as the threads are of the cloth or the cloth is of the colour on it. The non-intimate cause is one which is inseparably united in the same object either with the effect or with the (intimate) cause, as the conjunction of threads is of the cloth, or the colour of threads is of the colour of cloth. A cause different from both these is an instrumental cause, as the shuttle or the loom.

Intimate cause.

1. The threads constitute the intimate or material cause of the piece of cloth, because the latter is connected with the former by intimate union (समवेतम् = अवयवित्वात् समवायसम्बन्धेन सम्बद्धम्). Similarly the colour in the piece of cloth being a quality resides in it by समवाय (गुणगुणिनोः समवायः), and hence the piece of cloth is the intimate cause of the colour. All constituent parts of a substance and all substances are intimate causes of their products as well as inhering qualities and actions respectively. The substratum is deemed a cause in the latter case because the qualities and actions cannot exist without it.

Non-intimate Cause.

2. The non-intimate cause is a link as it were between the initimate cause and the product. It is of two sorts. One is intimately connected with the material cause, and is thus समानाधिकरण with the product. The conjunction with which the separate threads are held together and which enables them to form the cloth-piece is the non-intimate cause, because being a quality it resides in the threads by समवाय, and is thus समानाधिकरण with पट. This तन्तुसंयोग is a necessary cause because it makes the पट what it looks, and distinguishes it from a mere bundle of threads. The example of the second kind of non-intimate cause is तन्तुरूप which is the non-intimate cause of पटरूप, because it is intimately united with the (intimate) cause (तन्तु) of the substance (पट) which is the *intimate* cause of पटरूप. The colour of the threads is not the *intimate* cause of

the colour of the cloth-piece because they are व्यधिकरण, and so there can be no connection between them. तन्तुरूप and पटरूप are not समानाधिकरण, for while तन्तुरूप resides in the threads, the पटरूप resides in the cloth. They are therefore connected only indirectly (परंपरासंबंधेन), which is explained by S. C. as पटरूपसमवायिकारणीभूतपटसामानाधिकरण्यस्य तत्त्वे सत्त्वात् परंपरासम्बन्धेन पटरूपसामानाधिकरण्यमपि सुलभमेवेतिभावः । परंपरासंबंधश्च समवायिसमवायः । ; that is, while तन्तुसंयोग is समानाधिकरण with पट by the समवाय relation, the तन्तुरूप is so with पटरूप by the combined relation, समवायिसमवाय, *i. e.* a समवाय with the पट the समवायिकारण of पटरूप. Both तन्तुसंयोग and तन्तुरूप are however called the असमवायिकारण of पट and पटरूप respectively. S. C. therefore gives, as a joint definition of the two sorts of non-intimate causes, समवाय-स्वसमवायिसमवायान्यतरसंबंधेन कार्येण सहैकस्मिन्नर्थे समवायेन प्रत्यासन्नत्वे सति आत्मविशेषगुणान्यत्वे सति कारणमसमवायिकारणम्; that is, a non-intimate cause should reside by समवाय, in a common thing in which कार्य resides either by समवाय or समवायिसमवाय, and should at the same time be different from the special qualities of the soul. The latter saving clause is needed to prevent cognitions produced from them, simply because both are intimately united with the same अधिकरण, the soul. It is of course needless to remark that the word कारण in the definition of असमवायिकारण in the text is to be taken for समवायिकारण.

3. The class of efficient causes comprises everything else that is necessary for the production of the effect but is not inseparable from it, such as the loom and the shuttle-cock in the case of the cloth-piece. Instrumental causes are of two sorts, 'universal' which are eight (ईश्वरः, तज्ज्ञानेच्छाकृतयः, दिक्कालौ, and अदृष्टम् including धर्म and अधर्म) and 'special,' which are innumerable. The agent also appears to be included in this third class, which is as a matter of fact miscellaneous, and comprehends everything that is not included in the first two. Others first divide cause into two sorts, principal (मुख्य) and accessary (अमुख्य), and then split

Instrumental cause.

up the principal cause into the above three classes, the group of accessaries consisting of all those minor circumstances which are required before production. Of the three sorts of causes mentioned above, the intimate cause is always a substance, because no other *padârtha* is capable of being the substratum of an intimate union; the non-intimate cause must be either an action or a quality, and nothing else; while the instrumental causes may be of any kind. The above three sorts of causes exist, it is said, in the case of positive things only, the अभाव having only an instrumental cause. Mere negation cannot have an intimate or a non-intimate cause as it does not reside in anything by intimate union. A remark to this effect is found in one copy of T. D., but its authority was not sufficient to warrant the addition in our text.

4. The name असमवायि is rather misleading, as it does not properly denote a cause which is not connected by समवाय with the effect. In this sense निमित्तकारण will also be असमवायि, while one species of असमवायि proper will be excluded. The origin of the name can be explained only by supposing that the *Naiyâyikas* first divided causes into two classes, those which are separable, and those which are inseparable from effects. The first are instrumental; the second are of two sorts, material or समवायि and non-material or असमवायि. So an असमवायि simply means an inseparable cause which is different from समवायि. The असमवायिकारण is not recognized by other systematists, and is an invention of the *Naiyâyikas* who, holding the theory of the utter distinctness of effect from cause, are obliged to assume a link to join the two. The advocates of सत्कार्यवाद् regard cause and effect as united by the relation of identity (तादात्म्यसंबंध). Nor do they recognize समवाय. In their opinion therefore causes are only two-fold, material (उपादान) and instrumental (निमित्त).

Classification of causes.

5. It may be useful here to compare briefly the *Nyâya* classification of causes with those of Western philosophers. Aristotle mentions four kinds of causes: First, the Form proper to each thing, called the *formal cause* or *Quiddity* by schoolmen.

When a potter makes a jar, he must first have in his mind an idea of what a jar is; or when a house is built, the architect must first draw a plan on paper. This is the *causa formalis* of Aristotle, and appears to combine in itself two different conceptions of the *Naiyâyikas*, namely, that of जाति which is regarded as antecedent and necessary to the production of all things, and that of असमवायिकारण which often being a संयोगविशेष corresponds to the plan or shape of the product. The second cause of Aristotle, *causa materialis*, is identical with the उपादान or समवायिकारण. The third is the principle of movement that produced the thing, called *causa efficiens*, corresponding to the निमित्तकारण of *Nyâya*. The fourth is the reason and good of all things, called *causa finalis*. There is nothing corresponding to a final cause in the *Nyâya* system, except perhaps the universal cause, *destiny* (अदृष्ट). A jar is made for carrying water, and so Aristotle would say that its final cause is the purpose for which it is to be used, namely, carrying water; A *Naiyâyika* would say that a particular jar was produced by the potter for the ultimate use and enjoyment of some unknown person who would buy it; and so the अदृष्ट of that buyer may be said to be a cause in the production of that jar. This notion of अदृष्ट being a cause to every product seems to have been invented, like the final cause of Aristotle, to satisfy our moral intuition that nothing exists in this world without a purpose, and perhaps also to account for many phenomena in the world that cannot be explained more naturally. Bacon inveighed strongly against the final cause of Aristotle; and similarly in India the universal causality of अदृष्ट also came to be ignored by later systematists, although it was never expressly repudiated.

6. In addition to the above four causes, the *model* or *exemplar* was considered as a necessary cause by the Pythagoreans and Platonists, which *model* was *numbers* according to the former, and *ideas* according to latter. *Naiyâyikas* conceived a जाति (घटत्व or गोत्व) to be eternally existing, in imitation of which the particular jars or cows were formed. In addition to the platonic enumeration of causes, Seneca insisted

that time, space and motion ought to be regarded as causes. *Naiyâyikas* included the first two under the head of universal causes, and assigned a peculiar position to the last under the name of व्यापार. Modern science has practically abandoned all these distinctions as useless and often impossible. As has been pointed out, it is sometimes very difficult to single out the material cause of a compound product from the efficient causes, while the formal and final causes are often nothing more than the thing itself. The only real distinction perhaps is that between material and non-material or instrumental causes, that is, those which are inseparable from the product and those which are separable. Consequently *Vedântins* mention only two causes उपादान (material) and निमित्त (instrumental).

SECT. XLI. करणम्

" *Of the three sorts of causes just mentioned that alone which is peculiar is the* करण. "

1. In order to exclude the intimate and non-intimate causes which can never be करण, we should either insert before असाधारण the additional qualification व्यापारवत्त्वे सति as N. B. suggests, or take the word असाधारण itself as implying that condition. करण therefore is that efficient cause which directly and immediately produces the effect by its own action. The present section seems to have been copied from *Keśava Miśra's* remark तदेवं तस्य त्रिविधकारणस्य मध्ये यदेव थमपि सातिशयं तदेव करणम्.* *Annambhaṭṭa* substitutes असाधारण for सातिशय, but probably intends to convey the same meaning. Hence असाधारण may be taken to mean फलायोगव्यवच्छिन्न, and almost corresponds to what English lawyers call a *proximate* cause. This section sums up the intervening discussion about causality.

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* T. B. Bom. ed. p. 25.

SECT. XLII. प्रत्यक्षम्

Perception is the peculiar cause of Perceptive knowledge. Perceptive knowledge is the knowledge born of the contact of the organ with (external) object. It is two-fold, undifferentiated and differentiated. Of these, undifferentiated is the knowledge of a thing without its qualities, e. g. 'this is something.' Differentiated is the knowledge of a thing with all its qualities, e. g. he is Dittha, he is a Brahmin, he is black.

Percept and perception

1. करण, कारण, and कार्य being thus defined, the author now proceeds to define in order the four proofs and the four kinds of apprehension which stand in the relation of causes and effects respectively. *Annambhatta* uses the word प्रत्यक्ष for both the proof and the resulting knowledge, but other writers have done better in giving a separate name to the latter, viz. साक्षात्कार, so that the proof is defined as साक्षात्कारज्ञानकरणम्. Others again define प्रत्यक्ष as प्रत्यक्षप्रमाकरणम्* or साक्षात्कारिप्रमाकरणम्,† but *Annambhatta* seems to have deliberately used ज्ञान in order to include both right and wrong apprehensions. The four divisions of प्रमा are equally applicable to अप्रमा, and there is no need of defining them separately as the same करण usually gives rise to both kinds of apprehensions. The rightness or wrongness of a perception is determined by quite extraneous reasons such as दोषाभाव, and not by any difference of इन्द्रियसन्निकर्ष. Of course the rightness or wrongness when determined would affect the proof also, and make it either correct or incorrect. The etymology of प्रत्यक्ष in the sense of प्रमाण is explained as प्रतिगतमक्षम् or अक्षस्य प्रतिविषयं वृत्तिः, the presence of an organ at each object. In the sense of ज्ञान, the same word is explained differently as अक्षमक्षं प्रतीत्योत्पद्यते or प्रतिगतमाश्रितमक्षम्, knowledge which is obtained through each organ. The प्रत्यक्षज्ञान is defined as that knowledge which is produced by the contact of organs with external objects. The word ज्ञान is here used to exclude सन्निकर्षध्वंस which is also संन्निकर्षजन्य, while the epithet इन्द्रियार्थ differentiates प्रत्यक्ष from other kinds of knowledge.

2. The process of perception is thus described by *Vâtsyâyana* : आत्मा मनसा संयुज्यते । मन इन्द्रियेण । इन्द्रियमर्थेनेति.‡ Why then is one सन्निकर्ष only singled out as the cause of

* T. K. Bom. ed. p. 8. † T. B. Bom. ed., p. 27.
‡ *Vat.* on by G, S. I. 1. 4.

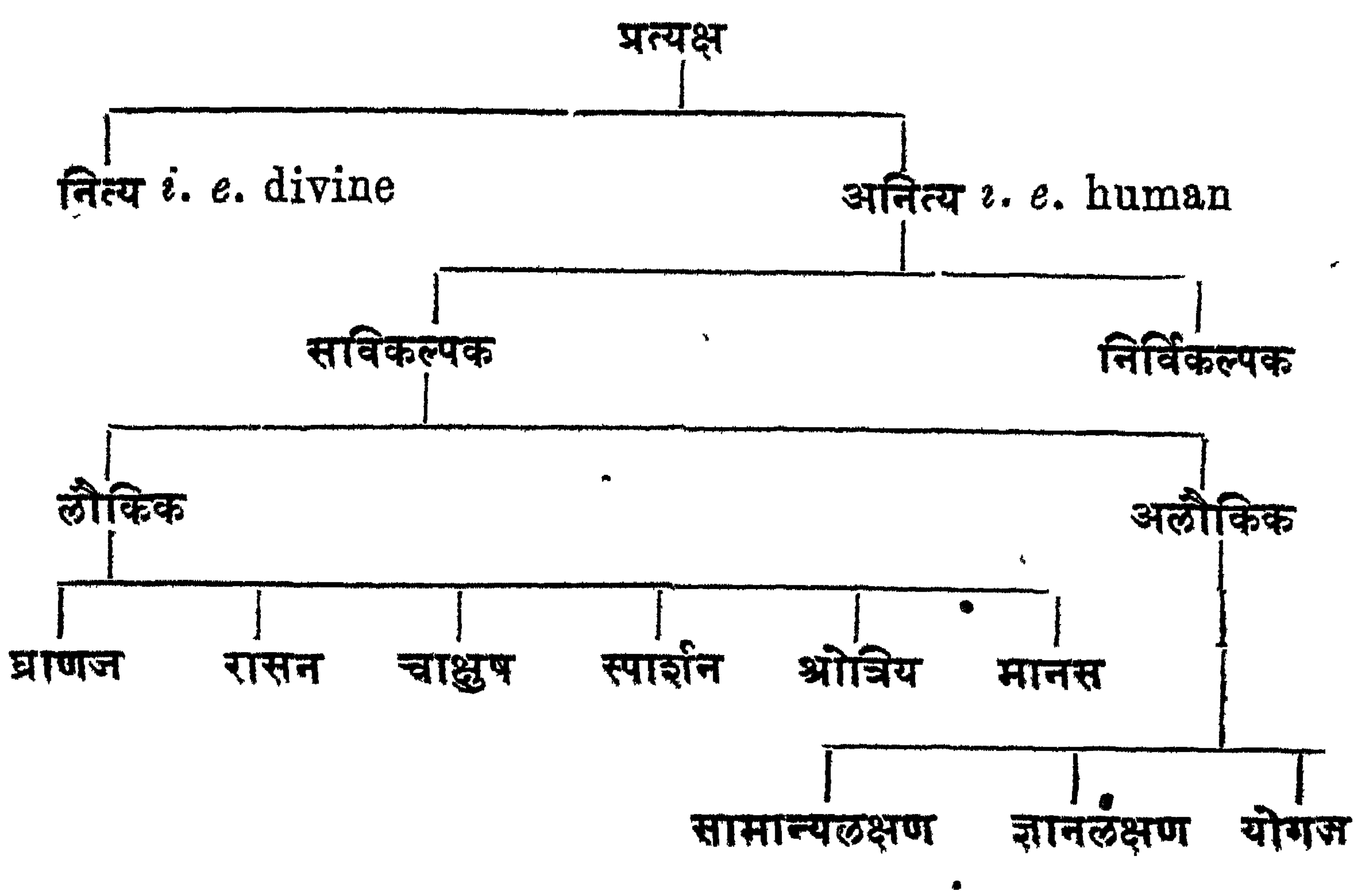
a percept (प्रत्यक्षज्ञान) when as a matter of fact three come into operation? The reason, says the commentator, is that the last is peculiar to प्रत्यक्ष while the former two, viz. the contact of soul and mind and that of mind and organ are common to all kinds of knowledge. This definition of perception is literally borrowed from *Gotama's* aphorism, which however limits its scope by adding three more epithets अव्यपदेश्यमव्यभिचारि व्यवसायात्मकम्. Of these अव्यभिचारि, denoting uncontradicted knowledge, excludes अप्रमा which comes under ज्ञान; while अव्यपदेश्य (unnameable) and व्यवसायात्मक (differentiated) denote the two kinds of प्रत्यक्ष, निर्विकल्पक and सविकल्पक ज्ञान. *Annambhaṭṭa's* definition includes प्रत्यभिज्ञा (reminiscence) and also मानसप्रत्यक्ष, such as that of pleasure, pain etc. as well as that of Soul. No organ of sense is needed in the case of the last as there is mind which is accepted to be इन्द्रिय.

An objection.

2. The definition however is defective in one important respect, namely, that it does not include ईश्वरप्रत्यक्ष which, being नित्य, is not इन्द्रियसन्निकर्षजन्य. Another definition of प्रत्यक्ष is therefore given by N. B. which applies to both divine and human knowledge, viz. ज्ञानाकरणकं ज्ञानं प्रत्यक्षम्. *Percept* requires no previous knowledge for its करण. अनुमिति is caused by व्याप्तिज्ञान, शाब्द by शब्दज्ञान, उपमिति by सादृश्यज्ञान and स्मृति by अनुभव; but no such previous knowledge is required for perceptive knowledge. This latter definition also is not perfect for it excludes the most important portion of perceptive knowledge namely, the सविकल्पप्रत्यक्ष, which is born out of निर्विकल्पप्रत्यक्ष. Some no doubt exclude the whole सविकल्पकज्ञान from the province of perception, and so according to them the definition will be accurate; but of this later S. M. gives only इन्द्रियजन्यज्ञानम् as the definition of प्रत्यक्ष, but this, besides involving all faults chargeable to *Annambhaṭṭa's* definition, is liable to the serious objection of being applicable to all kinds of knowledge, since all cognitions are products of mind which is an इन्द्रिय. Hence *Annambhaṭṭa's* defini-

tion is the best,and has been most commonly accepted. Its अव्याप्ति on ईश्वरप्रत्यक्ष can be explaind away, as N. B. remarks, by an admission that the definition being borrowed from *Gotama* himself than whom no higher authority can be cited, must be regarded as not intended to apply to ईश्वरप्रत्यक्ष. God's knowledge in fact stands on an altogether different level from our own, and the divisions and definitions of the human knowledge ought not to be extended to the divine. The divisions and sub-divisions of बुद्धि, for instance, given above do not at all apply to God's knowledge. There can be no past remembrance, or recollection in the case of God, for all His knowledge is presnt and eternal. There is no निर्विकल्पज्ञान for Him. Similarly neither inference, nor comparison, nor any other operation of derivative knowledge can be attributed to Him, who being Omnicient perceives all things directly and does not require the aid of any mediate proof. All knowledge of God is therefore प्रत्यक्षप्रमा; and being of so different a kind from our own will require a separate definition for itself. The defect of अव्याप्ति on that account is not therefore of much weight.

3. Perceptive knowledge is of various kinds. The divisions and sub-divisions will be as follows:—



The distinction between सविकल्पक and निर्विकल्पक प्रत्यक्ष will be explained later. The first is divided into *ordinary*, namely, that derived from organs of senses, and *extraordinary*, that not so derived. The *ordinary* percept is six-fold, according to the six organs, smell, taste, vision, touch, hearing, and mind. The *extraordinary* percept, otherwise called प्रत्यासत्ति, is three-fold. The first सामान्यलक्षणा (सामान्यं लक्षणं विषयो यत्र) is that in which the knowledge of a general notion, e. g. घटत्व, is comprehended immediately upon the direct perception of घट. When we see a jar we do not know the jar alone but get also the general class-notion of jar ; this latter is derived by extraordinary perception, because a जाति is not perceptible by any organ of sense. The second kind called ज्ञानलक्षणा is that in which one percept gives rise to another, as when one perceives a piece of sandal-wood at a distance, one at once knows that it is fragrant. Here the fragrance could be perceived neither by the eye, nor by the nose as the sandal-piece was at a distance ; it is therefore apprehended by a kind of *extraordinary* perception. The third kind योगजा belongs exclusively to *Yogins* who, by means of their superhuman powers, can perceive objects imperceptible to others.* It can be easily seen that while the third kind of extraordinary perception is hypothetical, the first two are varieties of associated knowledge, and should properly go under judgments derived by what is called immediate inference. *Annambhaṭṭa* does not mention these, and therefore it is doubtful whether he accepted them. Probably he did, as there is nothing in his book inconsistent with them.

Divisions of प्रत्यक्ष.

4. As the author himself declares at the end of the next section that इन्द्रिय is the करण of प्रत्यक्ष, there ought to be no doubt on the point, but it should be noted that so far as the definition of प्रत्यक्षज्ञान is concerned, it is applicable to either view of करण.† If compared with the definition of अनुमिति (परामर्शजन्यं ज्ञानं) it favours the view of संनिकर्ष being the

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* T. K Bom ed p 9; B P. 63-4.

† See Note 2 under Sect. 37, p. 187, *Supra*.

प्रत्यक्षकरण just as परामर्श is that of अनुमिति; but the word जन्य need not be here strictly construed in the sense of being directly or immediately produced.

Savikalpaka and Nirvikalpaka.

5. A percept is of two kinds, *indeterminate* and *determinate*, or if we may adopt Whately's terms, *incomplex* and *complex*. When a thing gradually comes within the range of our sight, we first simply apprehend that there is something, and it is after some time and after we have observed the thing more closely that we recognize it to be a particular thing having particular qualities. The first is called निर्विकल्पक or निष्प्रकारक, while the second is सविकल्पक or सप्रकारक. निर्विकल्पक ज्ञान is defined as 'that knowledge in which there is no प्रकारता,' while सविकल्पक is 'that in which it exists.' प्रकारता is already explained as the property of a particular cognition which distinguishes it as the cognition of a particular object from other cognitions, *e. g.* घटत्व is the प्रकारता of घटज्ञान which distinguishes it from पटज्ञान.* It is evident that the सप्रकारकज्ञान presupposes the previous knowledge of प्रकारता, that is, we cannot know that a particular thing is घट unless we first know what घटत्व is. The maxim is नागृहीतविशेषणा बुद्धिर्विशेष्यमुपसंक्रामति, that is, we cannot apprehend the qualified without first knowing the qualification. The सप्रकारकज्ञान is essentially the knowledge of the qualified object, for its प्रकार is nothing more than the qualities of the object, while the निष्प्रकारकज्ञान, being a knowledge of the object itself without the qualities, clearly precedes the सप्रकारक. T. D. defines सविकल्पक as नामजात्यादिविशेषणविशेष्यसंबंधावगाहि ज्ञानम्, 'knowledge which comprehends the relation of the qualified and the qualifications such as name, class, etc.' We already possess a previous knowledge of घटत्व, नीलरूप and other qualities, acquired by former experience. We then see some unknown thing come within our vision. At first we only feel that it is *some thing*; that is, we apprehend only the most general of its attributes, namely, सत्ता or

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* See Note under Sec. 35, p. 180, *Supra*.

भावरूपता; this is the निर्विकल्पक or indeterminate knowledge, for in it the thing is not yet determined or distinguished from other things. At this stage we have two separate knowledges, the knowledge of the object घट as some thing, and the previous knowledge of घटत्व; but there is no connection between the two, and hence both these individual knowledges are संबंधानवगाहि. They are then combined together and form a joint knowledge घटत्ववान् घट in which (घटत्व) appears as the प्रकार of the other. Those which were at first separate are combined and connected with each other and thus the joint knowledge becomes संबंधावगाहि or सप्रकारक. In this way we first apprehend qualities separately and then tackle them to the object. These qualities are chiefly of four sorts, गुण, क्रिया, जाति and संज्ञा. In the sentence श्यामो देवदत्तो ब्राह्मणः पचति we have instances of the four kinds, श्याम being गुण (quality), देवदत्त being a संज्ञा (proper name), ब्राह्मणत्व being जाति (class), and पचति denoting the action पचनक्रिया. Each of these properties as well as the individual in whom they reside are first apprehended separately, and then results the complex perception expressed in the sentence.

Why is Nirvikalpaka recognized

6. The two kinds of knowledge being thus distinguished, the question arises why they are both recognized. The सप्रकारक ज्ञान is the subject of our daily consciousness and cannot be ignored; but the निष्प्रकारक ज्ञान according to *Naiyâyikas* is not actually perceived and is to be inferred only. The inference is stated by T. D. and is briefly expressed in the maxim quoted above, नागृहीतविशेषणा बुद्धिर्विशेष्यमुपसंक्रामति. The *Nyâya* theory therefore clearly appears to be that the सप्रकारक ज्ञान alone constitutes *percept* proper, while निष्प्रकारक is simply assumed as a necessary condition of it.

The difficulty about Nirvikalpaka.

7. It may not be amiss here to go a little deeper into the merits of this theory of two sorts of perceptive knowledge. In the first place it should be noted that although orthodox systematists generally agree in the *Nyâya* doctrine of the two kinds of knowledge,* the *Bauddhas* radically differ from them in taking the निर्विकल्पक ज्ञान alone to be the true perceptive knowledge, and the सविकल्पक to be neither real nor perceived. The qualities according to them having no objective existence, the सप्रकारकज्ञान cannot be real, but only a subjective conception like a barren woman's son, while the निर्विकल्पक being concerned with the thing itself is real.† This argument of the *Bauddhas* is no doubt based on their general theory of the falsity of material existence, but its importance to us consists in its pointing out the weakness of the *Nyâya* doctrine. Even taking the *Nyâya* definition of प्रत्यक्ष it is evident that सविकल्पक ज्ञान can hardly be called प्रत्यक्ष as it is merely a combination of the several knowledges of the qualities with the indeterminate knowledge of the property-less object. सविकल्पक therefore is not simple and direct knowledge gained immediately through the contact of the senses with the objects; it is complex and mediate like अनुमिति or उपमिति and does not therefore deserve to be called प्रत्यक्ष, if we accept the definition of प्रत्यक्ष given in the book.

8. The निर्विकल्पक alone is really derived from इन्द्रियसान्निकर्ष, while the सविकल्पक consists of inferences based partly on निर्विकल्पक and partly on previous knowledge. When a ship for instance appears on the ocean near the horizon, we first see only a black spot, which gradually enlarges. From this and from like observations made before, we infer that the lines above the spot must be the masts and the thing must be a ship. Similarly in घटज्ञान we first see indistinctly a thing which appears to have the same form as that of a jar with which we are familiar; and hence we infer that the round thing must be a घट. This is virtually the same process as the proof उपमान by which a *gayal* is likened to a cow. Besides we must have the knowledge of the name घट before

* Sânkhya-T. K. p 93.

† V. S. Up. *Calc. ed.* 358.

we can cognize the thing as घट; and hence शाब्दज्ञान also is necessary for सविकल्पक प्रत्यक्ष. *Determinate* knowledge is therefore properly speaking a mediate cognition obtained by the operation of several other proofs. The remarks of an English writer on Logic are very apposite on this point.

"What we term a *fact* or an *observation,* is seldom an absolutely single or individual conscious impression We speak of the fact that high water at Leith follows high water at London by a certain definite interval; but this is far beyond any individual impression upon our senses. It is a generality of considerable compass, the result of the comparison of many separate observations. *** There is a process of induction requisite in order to establish such a fact; and all the securities for soundness in the inductive proofs are called into play."*

And again:—

"It is from previous knowledge that we know that we are looking at a needle (magnet), and that its direction is north. The simplest observation is thus a mixture of intuition and inference ; and our habit of joining the two is one cause of error in the act of observing."

Are not the *Bauddhas* then nearer the truth when they call the निर्विकल्पक the *percept* proper, and the सविकल्पक a mere combination of conceptions that are according to them devoid of external reality? And are not *Naiyâyikas* inconsistent in including सविकल्पक under प्रत्यक्ष which is *ex hypothese* born of इन्द्रियसंनिकर्ष only? But this conclusion cannot be accepted; for once accept it, the dispairing शून्यवाद of the *Bauddhas*, that all the world is a falsity and a mirage, necessarily follows. निर्विकल्पक being indeterminate cannot give us any mental notion ; while if it be the only प्रत्यक्ष, all other proofs which essentially depend upon प्रत्यक्ष as their starting point will be without basis and therefore void. It is the सविकल्पकज्ञान that forms the real basis of all our mental processes. To deprive it of its primary and authentic character is therefore to take away the very foundation of our knowledge of the external world and thus to reduce it to a mere delusion and a snare.

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* Bain: *Deductive Logic* p. 36-7.

A partial solution.

9. Here indeed we have a dilemma which cannot be solved by observation or reasoning, because it lies at the root of observation itself. Various solutions, more or less plausible, have been offered, out of which we are concerned with only that which is furnished by later *Naiyâyikas,* and which, though not quite satisfactory, at least absolves them from inconsistency. निर्विकल्पकज्ञान according to this school of *Naiyâyikas* is neither प्रत्यक्ष, nor अनुमिति, nor any other kind of अनुभव, and can hardly come under बुद्धि itself, as it gives rise to no व्यवहार. It can be neither प्रमा nor अप्रमा, for as it has no प्रकारता neither the definition तद्वति तत्प्रकारकत्वं nor अतद्वति तत्प्रकारकत्वं applies to it. It is no doubt ज्ञान, but ज्ञान of a peculiar kind and quite distinct from other cognitions. While other cognitions have defined objects (विशेष्यता), properties (प्रकारता) and relations (संसर्गता), निर्विकल्पक, says *Nîlakantha,* has none of these ; and so it is altogether of a different kind. Its position therefore under बुद्धि ought to be not as a subdivision of प्रत्यक्ष as *Annambhatta* has placed it, but rather as a subdivision of अनुभव above प्रमा ; thus :—

अनुभव (apprehension)
- निर्विकल्पक (indeterminate)
- सविकल्पक (determinate)
  - प्रमा
  - अप्रमा

निर्विकल्पक having no प्रकारता is thus discriminated from all *determinate* cognitions such as percepts, judgments, analogies and verbal knowledge, and may be given the name of *sensation,* while the सविकल्पकप्रत्यक्ष may be called *percept* proper. This is in accordance with Kant's division of *apprehension* into *perception* proper and *sensation* proper. This restriction of the meaning of the words *perception* and *percept* and their discrimination from *sensation* proper are accepted by a high authority. "Sensation," says Prof. Fleming, "properly expresses *that change in the state of the mind* which is produced by an impression upon an organ of sense (of which change we can conceive the mind to be concious, without any knowledge of external objects) : *perception* on the other

hand expresses the *knowledge* or intimations we obtain by means of our sensations concerning the qualities of matter; and consequently it involves, in every instance, the notion of externality or outness which it is necessary to exclude in order to seize the precise import of the word *sensation*."* This restricted use of *perception* to denote the cognitions of external objects through the senses was introduced by Reid and Kant and is now generally accepted. So that we may very well call निर्विकल्पकज्ञान sensation and सविकल्पकप्रत्यक्ष *perception* or rather *percept*. In this way the dilemma hinted above can be removed partially at least.

10. The determinate cognitions will have many varieties, according as they are more or less mediate, and the medium is of different kinds. If it is the cognition of a real external object it is प्रत्यक्ष; if it is a judgment obtained by a combination of two or more propositions, it is अनुमिति; if an analogy between two objects known by comparison, it is उपमिति; and if a notion derived from the meaning of words, it is verbal knowledge. The सविकल्पकप्रत्यक्ष therefore may be mediate and yet sufficiently distinguishable from other cognitions. Nor is the definition इन्द्रियसन्निकर्षजन्य quite inapplicable to सविकल्पकप्रत्यक्ष; for although it is not solely due to सन्निकर्ष and although a सन्निकर्ष of one kind or another is present in all kinds of apprehension, the सन्निकर्ष is the direct and immediate cause of सविकल्पज्ञान while in अनुमिति etc. other operations of the mind intervene. The constituant cognitions, which by combining form the complex सविकल्पकप्रत्यक्ष, are necessarily obtained by संनिकर्ष, while in अनुमिति they need not be so obtained. The निर्विकल्पकज्ञान as well as the process of combining the separate cognitions of qualities so as to form one सविकल्पकज्ञान which comes after संनिकर्ष may be called the अवान्तरव्यापार.* In this way the *Nyâya* doctrine may with some modifications be reconciled with our common experience. *Keśava Miśra* attempts a very curious compromise which though easily comprehendible, is faulty as it reduces करण and व्यापार to mere relative notions. He lays down three varying pairs of करण and व्यापार for प्रत्यक्ष, viz. इन्द्रिय, इन्द्रियसंनिकर्ष and निर्विकल्पकज्ञान.

* Fleming. *Vocabulary of Philosophy* p. 443.

* T. B. Bom. ed. p. 27.

When निर्विकल्पकज्ञान is फल, इन्द्रिय is the करण, and संनिकर्ष is व्यापार; when सविकल्पक is फल, संनिकर्ष is the करण and निर्विकल्पक is व्यापार; and when इच्छा which results from knowledge is फल, निर्विकल्पक is the करण and सविकल्पक is व्यापार.* But this compromise is not accepted by later writers.

SECT. XLIII. संनिकर्षः.

The contact of organ and object, which is the cause of Perception, is of six kinds:—1 Conjunction, 2 Intimate union with the conjoint, 3 Intimate union with the intimately united with the conjoint, 4 Intimate union, 5 Intimate union with the intimately united, and 6 Connection of the attribute with the subject. Conjunction is the contact producing perception of the jar by the eye. Intimate union with the conjoint is the contact producing the perception of the colour of a jar, as the colour is intimately united with the jar which is conjoint with the eye. Intimate union with the intimately united is the contact in perceiving the genus of colour, as colour is intimately united with the jar conjoint with eye, and the genus of colour is intimately united therewith. Intimate union is the contact in the perception of word by the organ of hearing, as the organ of hearing is the ether in the cavity of the ear, (since) word is the quality of ether and the quality and the qualified are intimately united. Intimate union with the intimately united is the contact in cognizing the genus word, as the genus is intimately united with word which is intimately united with (organ of) hearing. The connection of the attribute and subject is the contact in the perception of negation, as the negation of a jar is an attribute of a place in contact with the eye wherever a place is devoid of a jar. The knowledge thus produced from the sixfold contact is Percept. Its peculiar cause is the organ. Hence organ is perception.

The six contacts.

1. Having defined प्रत्यक्ष as the product of the contact of the organs of sense with their appropriate objects, the author now enumerates and illustrates the six varieties of this contact, that is, six ways in which the different organs may come in contact with their objects. Three of these contacts are primary, viz. संयोग, समवाय and विशेषणविशेष्यता, and the other

* T. B. Bom. ed. P. 27.

three are combinations of the two former, viz. संयुक्तसमवाय, संयुक्तसमवेतसमवाय, and समवेतसमवाय. The organ of sight being a द्रव्य comes in actual contact with a substance like a jar when it sees it; and so the सन्निकर्ष is संयोग the ordinary *conjunction*. The eye perceives also the colour of घट, as colour is the special quality of light of which the eye is formed, but the organ being a द्रव्य cannot have direct conjunction with the quality of another substance; and hence the contact of the eye with घटरूप is संयुक्तसमवाय, *intimate union with the conjoined*, the रूप being intimately united with the घट which is conjoined with the organ. The जाति on घटरूप is also perceived by the organ of sight, because the *Naiyâyikas* have laid down a maxim, येनेन्द्रियेण यद्गृह्यते तेनेन्द्रियेण तद्गतं सामान्यं तत्समवायस्तदभावश्च गृह्यते,* 'the organ which apprehends a thing also apprehends the जाति and समवाय on that thing as well as its negation.' घटरूपत्व is therefore perceived by the eye by means of the contact संयुक्तसमवेतसमवाय, intimate union with a thing (घटरूप) which is intimately united with a substance (घट) that is in conjunction with the organ. The fourth contact is simple intimate union, as that of श्रोत्र organ of hearing, which being आकाशस्वरूप, is intimately united with its product the sound. The difference between श्रोत्र and other organs is that, while the latter are products (विकार) of their corresponding elements, such as the eye of light, the nose of earth and the taste of water, the श्रोत्र is the all-pervading ether itself in its elemental form, defined and conditioned by the cavity of the ear. Sound therefore as a product of the ether has direct intimate union with श्रोत्र, while other qualities are not so directly brought into contact with their corresponding organs. शब्द being apprehended by समवाय, its जाति शब्दत्व is obviously apprehended by समवेतसमवाय, intimate union with a thing (शब्द) intimately united with the organ. The last सन्निकर्ष will be noticed further on.

In the case of other organs also the same contacts will be found efficient. The only organ besides the eye which, according to some, apprehends substances and therefore has conjunction with them is the organ of touch. The three external organs, घ्राण, रसन and श्रोत्र apprehend qualities only; and the kind of contact operating in the case of each object apprehended by these senses can be easily determined.

* T. K. Bom. ed. p. 10.

2. The subject is involved in some intricacy owing to the difference that exists in the perceptive capacity of the various organs. Some organs are said to perceive substances and qualities, while others perceive qualities only. Hence we must distinguish between the perception of substances and the perception of qualities, actions and generalities. गुण, कर्म and सामान्य are, according to all, perceived by their respective organs and by means of appropriate contacts. Perception of these therefore is divided into six kinds according to the six organs of sense, namely घ्राणज, रासन, चाक्षुष, स्पार्शन, श्रौत्रिय, and मानस, while the things perceived are respectively the qualities, odour, savour, colour, touch, sound, pleasure, and pain, as well as their generalities and negations.* Substances, however, are held to be perceivable by two senses only, the sight and the touch, the remaining four organs being capable of perceiving qualities only. As to the perception of substances by sight there is not and cannot be any doubt, but there is a difference of opinion as to whether the organ of touch is capable of perceiving a substance. The ancient *Naiyâyikas* answer is in the negative, asserting that उद्भूतरूप is a necessary condition for every external perception of a substance, while the moderns answer in the affirmative saying that उद्भूतस्पर्श can be also efficient for external perception. The controversy has been already explained in a previous Note.†

What things are perceived and how

Perception by touch.

3. *Viśvanâtha* lays down a rule which is as it were a compromise between the two views:—

उद्भूतस्पर्शवद्द्रव्यं गोचरः सोऽपि च त्वचः ।
रूपान्यच्चक्षुषो योग्यं रूपमत्रापि कारणम्‡ ॥

" A substance having a manifested touch is apprehended by the organ of touch, and also touch. Everything except colour that is perceived by the eye is perceived by the organ of touch also ; but (manifested) colour is necessary even in

* B. P. 51.

† See Note p. 117, *Supra*.

‡ B. P. 25.

these cases." त्वक् is thus declared to be capable of perceiving, but only when the thing is also visible to the eye; and the same will probably be the case with the other organs. Thus neither touch nor savour, nor odour can be perceived in atoms which have no manifested colour. This compromise however is not tenable, for if strictly taken, the touch in air and the sound in ether should always be imperceptible as the two substances have no manifested colour; but this cannot be accepted, and so the necessity of उद्भूतरूप for all perceptions must be confined to substances only. This is the ancient view and also that of *Annambhatta.* He has declared air to be imperceptible and inferrible from the existence of touch, while touch itself is defined as a quality perceived by the aerial cuticle (त्वग्ग्राह्यो गुणः). It is clear therefore that he accepts the capacity of त्वक् to perceive qualities, but not substances unless the latter possess उद्भूतरूप. Similarly the श्रोत्र can preceive sound but not ether, both because it has not उद्भूतरूप and also because it is not distinct from the organ. As regards मानसप्रत्यक्ष it is to be noted that while pleasure, pain etc. are perceived by the mind, the human soul is perceptible according to the *Naiyâyikas*, but not according to the *Vaiśeshikas.* * *Annambhaṭṭa* holds the *Vaiśeshika* view. By thus distinguishing the perception of substances from that of qualities we can, it seems, remove the apparent discrepancy between several passages of T. S. and T. D., in some of which the author appears to limit the term प्रत्यक्ष to चाक्षुषप्रत्यक्ष only, while in others as in the present, he talks of the perception by other organs such as श्रोत्र and त्वक्. In the case of substances there is चाक्षुषप्रत्यय only, and perhaps त्वाच also; while in the case of qualities there are six kinds which though nowhere expressly mentioned by the author can be inferred from his mentioning श्रोत्र in the present passage. In conclusion he declares the organ itself to be the प्रत्यक्षप्रमाण that is the करण of प्रत्यक्ष, thereby removing any doubt as to whether he takes इन्द्रिय or इन्द्रियसन्निकर्ष to be the करण. †

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* B. P. 49; see Note 6 under Sec. 17, p. 144, *Supra.*

† See on this Note p. 191, *Supra*

4. The five contacts account for the perception of the first four categories. विशेष being a परमाणुधर्म is unperceptible. The cases of समवाय and अभाव are specially provided for by the sixth संनिकर्ष called विशेषणविशेष्यभाव. This last is of a peculiar kind, and is assumed to account for the perception of negation and intimate union according to those in whose opinion both are perceptible, and of negation only according to those who deny the perceptibility of समवाय.

The sixth contact

Viśvanâtha says:—अभावप्रत्यक्षे समवायप्रत्यक्षे चेन्द्रियसंबद्धविशेषणताहेतुः। वैशेषिकमते तु न समवायः प्रत्यक्षः* The *Naiyâyikas* hold समवाय to be perceptible by विशेषणविशेष्यभाव, while the *Vaiśeshikas* regard it as अतीन्द्रिय and inferrible only. *Annambhaṭṭa* as usual holds the *Vaiśeshika* view, as may be easily guessed from his proving समवाय by inference in T. D. on Sect. 79. The विशेषणविशेष्यभाव is therefore confined, according to our author, to the perception of negation, which requires a special contact because neither संयोग nor समवाय is possible in the case of अभाव. Negation not being a substance cannot exist by itself; nor can it reside in any other substance by समवाय, as it is neither quality, nor action, nor जाति. How does it then exist in the world, and how is it apprehended? It is conceived, replies the *Naiyâyika* as a *property* (धर्म) of its अधिकरण, that is, of the thing on which it exists. Thus in a cognition घटाभाववद्भूतलम् the घटाभाव is spoken of as the विशेषण of the भूतल which is the विशेष्य, their relation विशेषणविशेष्यभाव being expressed by the termination वत्. Now let us see how this cognition takes place. We observe the spot of ground and see no jar on it. The spot of ground being a substance is perceived by the contact संयोग, that is, it is physically connected with the कृष्णताराग्रवर्ति चक्षुः; but the घटाभाव on भूतल can come into contact with the eye through भूतल only. The संनिकर्ष therefore by which the घटाभाव on भूतल is perceived is the contact between the चक्षुस् and भूतल, *i. e.* संयोग, plus that between भूतल and घटाभाव, *i. e.* विशेषणविशेष्यभाव, the combined contact

* S. M. *Calc. ed.* p. 53.

the organ is identical with आकाश which is the real अधिकरण of शब्दाभाव. शब्दत्वाभाव (*i. e.* the अभाव of कत्व on खत्व) is apprehended by इन्द्रियसमवेतविशेषणता.* Both विशेषणता and विशेष्यता are therefore of two kinds, इन्द्रियविशेषणता-शेष्यता simply, and इन्द्रियसंबद्धविशेषणता-शेष्यता; the first two in the perception by श्रोत्र and correspond to समवाय and समवेतसमवाय contacts, the latter two in the case of other organs and correspond to the other three contacts. विशेषणविशेष्यभाव mentioned by *Annambhatta* is therefore not a simple contact but has five varieties, corresponding to the first five contacts, although all of them are comprised under one name as they all have a common element विशेषणता or विशेष्यता.

'Anupalabdhi' proof.

8. T. D. here introduces a discussion as to why a fifth proof called अनुपलब्धि which is accepted by *Mîmâmsakas* and *Vedântins* is not recognized by the *Naiyâykas*. The former hold that अभाव is not perceptible because there can be no manner of contact between a substantial organ and a pure negation, and have therefore to account for the apprehension of negation by a fifth proof called अनुपलब्धि (non-perception); while the *Naiyâgikas* hold that अभाव is perceptible by the same organ which perceives its प्रतियोगि, but by means of a peculiar संनिकर्ष called विशेषणविशेष्यभाव. So that one party assumes a separate proof to account for अभावज्ञान, and the other assumes a separate संनिकर्ष. The arguments on both sides are equally specious and interminable, and the controversy is at last reduced to a determination of the comparative simplicity (लाघव) of the two rival assumptions. The *Naiyâyikas* however cannot wholly dispense with अनुपलब्धि. अभाव is not a thing that is independently known. The cognition of अभाव necessarily depends on the previous knowledge of its counter-entity (घट) and its support (भूतल). Now the fact that we never perceive घटाभाव wherever there is घट shows that there is a relation of contrariety between the

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*T. K. Bom. ed. P. 9; S. M. Calc. ed. p. 53-4.

two, and that the absence of the one must be ascertained before the other can be apprehended. This ascertainment of the absence of घट, or अनुपलब्धि, is therefore deemed to be a necessary condition for the perception of घटाभाव; that is, अनुपलब्धि is a सहकारी (accessory) of the चक्षुरिन्द्रिय which perceives घटाभाव on भूतल. Now what is this अनुपलब्धि? It is not simply the not-perceiving or not-finding; for though we do not perceive घट in darkness, we do not also perceive घटाभाव there. The अनुपलब्धि (non-perception) must be तर्कितप्रतियोगिसत्त्वविरोधि, that is, must be 'inconsistent with the hypothetical assumption of the existence of its प्रतियोगि घट.' It is not sufficient that we do not perceive घट; we must not perceive it in a place, where from all surrounding circumstances we would naturally expect to find it, but do not owing to its actual absence. The अनुपलब्धि must therefore be preceded by an ascertainment that no unfavourable circumstances such as darkness exist which would prevent even a present घट from being perceived. T. D. 's expression तर्कित-प्रतियोगिसत्त्वविरोध्यनुपलब्धि has been dissolved and interpreted by *Nīlakaṇṭha* in two ways both of which really convey the same meaning. The simpler method is तर्कितमारोपितं यत्प्रति-योगिसत्त्वं तद्विरोधिनी याऽनुपलब्धिः 'that non-perception which is inconsistent with the assumed existence of प्रतियोगि.' तर्क is an assumption or hypothesis (*a reductio ad absurdum* as it is sometimes called) which is for a moment taken for granted for the purpose of proving the contrary. So here we first assume the प्रतियोगिसत्त्व, *i. e.* the existence of घट, in the place, and then reject it as false because that प्रतियोगिसत्त्व is not perceived although all the conditions are favourable. Our reasoning is यद्यत्र घटोऽभविष्यत्तर्हि भूतलमिवाद्राक्ष्यत्, 'if there had been घट here, we would have necessarily perceived it just as we perceive 'भूतल,' the perception of भूतल showing that the usual conditions for चाक्षुषप्रत्यक्ष are existing. By this तर्क we hypothecate the existence of घट in the place. But this hypothecation is inconsistent with the actual fact that we do not perceive the घट, and must be therefore rejected. In this way our non-perception of घट which was doubtful at first is made certain by the intermediate hypothecation

and its rejection. It is this fully ascertained non-perception that assists the eye in apprehending घटाभाव. The compound may also be dissolved as तर्किता आपादिता प्रतियोगिनो घटादेः सत्त्वस्य सत्त्वप्रसक्तेः विरोधिनी या उपलब्धिः तत्प्रतियोगिकोऽभावोऽनुपलब्धिः 'that non-perception which is opposed not to the real existence of घट but to its assumed existence.' Either way the result is the same, that the non-perception must be first ascertained by a proper inquiry that the घट does not really exist. But even this periphrasis is not enough to guard the definition from a fault. Merit (धर्म) and demerit (अधर्म) being qualities of the soul are imperceptible ; if therefore one after looking for them in vain concludes that they do not exist at all, he will be quite wrong, for the imperceptibility of merit and demerit is inherent and not due to their non-existence. अनुपलब्धि is therefore qualified with योग्य, so that the ascertained non-perception must be of a thing capable of being perceived. In the *Naiyâyika* view therefore अभाव is perceived by the विशेषणविशेष्यभाव-संनिकर्ष (*i. e.* as a property of its support भूतल) with the accessory aid of a योग्यानुपलब्धि, that is, an ascertained non-perceptible object. The *Naiyâyikas* have thus to make two assumptions, one of a new संनिकर्ष and another of its accessory अनुपलब्धि ; while the *Mîmâṁsakas* are satisfied with one assumption only, namely that of a new प्रमाण or प्रमाकरण. T. D. thinks that the first two being only subordinate, there is greater लाघव in assuming those two than in assuming the last one ; because it is simpler to assume two operations (व्यापार) than to recognize a separate instrument (करण). Besides the relation विशेषणविशेष्यभाव is not really a new thing ; but it is identical with the अधिकरण भूतल itself, for when we say that there is घटाभाव on भूतल we really mean nothing more than that there is भूतल and nothing else. Hence *Nîlakaṇṭha* defines विशेषण-विशेष्यभाव as स्वरूपसंबधावच्छिन्नाधाराधेयभावः. The only new assumption is that of अनुपलब्धि which is also common to the *Mîmâmsakas*. The difference between the two schools is simply that the one calls it accessory, the other principal.

9. It may not be out of place here to notice a distinction between a cognition and its appropriate proof. Cognition resulting from प्रत्यक्षप्रमाण *perception* is a *percept*; but the contrary is not true; a *percept* does not necessarily arise from perception alone. It may arise from another kind of proof, such as शब्द or अनुपलब्धि. Both *Nyâya* and *Mîmâmsâ* agree in holding that अभाव is an object of perception. But the प्रत्यक्षत्व of a thing according to *Mîmâmsa* does not depend upon its resulting from प्रत्यक्षप्रमाण. A *Vedântic* writer remarks on this point, न हि फलीभूतज्ञानस्य प्रत्यक्षत्वे तत्करणस्य प्रत्यक्षप्रमाणतानियमत्वमस्ति । दशमस्त्वमसीत्यादिवाक्यजन्यज्ञानस्य प्रत्यक्षत्वेऽपि तत्करणस्य वाक्यस्य प्रत्यक्षप्रमाणभिन्नप्रमाणत्वाभ्युपगमात्* । Perceptive knowledge is not necessarily caused by perception; it may be caused by अनुपलब्धिप्रमाण or by शब्दप्रमाण, just as in the sentence, "Thou art the tenth," the cognition of being the tenth, though a percept, is not caused by perception, but by word.

The Nyâya view of Perception as distinguished from that of others.

10. The remark of the *Vedânta-Paribhâshâ* quoted at the end of the last preceding Note is important as showing that the *Nyâya* ideas of perception and percept materially differ from those of other schools, and that *Annambhaṭṭa's* definitions of them will not at all be accepted as correct by *Vedântic* writers. The *Naiyâyika* theory of perception and in fact of all knowledge is essentially physical. All cognitions (बुद्धयः) are conceived to be merely qualities residing in the soul which is a substance, and exactly in the same way as the quality of blueness or whiteness resides in the jar. These cognitions again are all primarily derived from perceptive experience which is again founded on the physical contact of senses with external objects. There is nothing idealistic or supersensuous in this matter of fact and almost mechanical theory of the origin of our ideas. This is the reason why the *Nyâya-Vaiśeshika* system has become so thoroughly realistic, and why it is strenuously opposed by the ideal and pantheistic philosophers of the *Sâṁkhya* and *Vedântic* schools. The *Nyâya* theory of perception has a very close resemblance to Locke's doctrine of sensationalism, and may be described

* *Vedânta-Paribhâshâ*, Calc. ed. p. 25.

almost in his own words. Locke considers that all our knowledge is derived from *experience* which is two-fold, "observation employed either about external sensible objects or about the internal operations of our minds, perceived and reflected upon by ourselves." These two sources of our ideas are thus described:—

"First. Our senses conversant about particular sensible objects, do convey into the mind several distinct perceptions of things, according to those various ways wherein those objects do affect them; and thus we come by those ideas we have of yellow, white, heat, cold, soft, hard, bitter, sweet, and all those which we call sensible qualities; which when I say that the senses convey into the mind, I mean, they from external objects convey into the mind what produces there those perceptions. This great source of most of the ideas we have, depending wholly upon our senses, and derived by them to the understanding, I call, sensation.

"Secondly. The other fountain from which experience furnisheth the understanding with ideas, is the perception of the operations of our own minds within us as it is employed about the ideas it has got; which operations when the soul comes to reflect on and consider, do furnish the understanding with another set of ideas which could not be had from things without; and such are perception thinking, doubting, believing, reasoning, knowing, willing, and all the different actings of our own minds; which we being conscious of and observing in ourselves, do from these receive into our understanding as distinct ideas, as we do from bodies affecting our senses." * * * * "The understanding seems to me not to have the least glimmering of any ideas which it doth not receive from one of these two. External objects furnish the mind with the ideas of sensible qualities, which are all those different perceptions they produce in us; and the mind furnishes the understanding with ideas of its own operations." *

This may almost be mistaken for a translation of a passage in some *Nyâya* work. Locke's theory of senses has

* Locke: *Essay on Human Understanding*, Bk. II. ch. 1. Sec. 3, 4.

now been partially abandoned chiefly owing to the powerful criticism of Kant, but its enormous influence on subsequent philosophical thought cannot be doubted. Similarly the *Naiyâyika's* doctrine of संनिकर्ष was afterwards considerably modified by *Vedântins* and others, but not before it had given a decided turn to philosophical speculations in India.

SECT. XLIV. अनुमानम्.

Inference is the peculiar cause of a judgment; judgment is the knowledge that springs from परामर्श *or consideration; Consideration is the knowledge of reason as distinguished by invariable concomitance, as for instance, the knowledge that this mountain has smoke which is invariably accompanied by fire is Consideration, while the knowledgo born of it that mountain is fiery is Judgment. Invariable concomitance is the certainty of association that wherever there is smoke, there is fire. The existence of an invariably concomitant thing on objects like mountain makes it the characteristic of a* पक्ष *or Receptacle.*

Judgment Inference.

1. The chapters on Inference contain the science of Indian logic as developed and skilfully dovetailed into the general system of metaphysics evolved by the *Vaiśeshikas*. अनुमान or inference is the instrument, अनुमिति the resulting judgment, and परामर्श the intermediate operation. अनुमिति is thus said to depend upon परामर्श. This परामर्श occupies a very important place in *Nyâya* logic; because when once a valid परामर्श is obtained a sound conclusion or अनुमिति necessarily and immediately follows, just as cloth is produced as an invariable consequence of the motion of the loom. Hence *Nyâya* writers mainly devote themselves to a discussion of this परामर्श and its two constituent parts व्याप्ति and लिङ्ग. लिङ्ग or हेतु is the thing from which the existence of another thing invariably concomitant with it is inferred; व्याप्ति is this invariable concomitance existing between the लिङ्ग and the other thing inferred from it, namely साध्य.

Inference analysed.

2. It will be clear from the above that an inference when simplified always consists of three terms denoting respectively हेतु, साध्य and their mutual relation of invariable concomitance, any two of which when given necessarily lead to a

knowledge of the third. Of these the साध्य is of course the thing which is always to be proved; and consequently the other two terms, हेतु and the हेतुसाध्यसंबंध or व्याप्ति as it is called, must be known before any inference is possible. In the Aristotelian syllogism they correspond to the first two premises which, being connected together by a common middle term, lead to the conclusion; but the Aristotelian syllogism is defective in so far as it merely implies this connection between the two premises, and has no separate premise to express it. The *Nyâya* syllogism on the other hand actually expresses this connection by joining the two premises, or rather the two terms denoting हेतु and व्याप्ति into one; that is, it does not merely state the two terms or premises separately, and then at once jump to the conclusion, but after stating them fully gives a third premise which combines the previous two terms, and thus gives a unity as it were to the two separate cognitions of हेतु and व्याप्ति. This combined premise is called the परामर्श, which immediately gives rise to the conclusion and is therefore said to be its करण.

Parâmarśa.

3. परामर्श has been said to be a combination of two distinct notions, that of हेतु and व्याप्ति. But how is this combination effected? Not simply by placing them side by side, nor by putting them in a sentence as subject and predicate, but by joining them inseparably as विशेष्य and विशेषण or subject and attribute. The विशेषणतासंबंध being indissoluble is the closest union between two things, and consequently the perfect unity of परामर्श is attained by making व्याप्ति the विशेषण of हेतु, that is, by making the हेतु व्याप्तिविशिष्ट. A परामर्श may therefore be defined as the knowledge not merely of व्याप्ति and हेतु but of व्याप्तिविशिष्टहेतु.

Author's definition.

4. The author however defines परामर्श as the knowledge of व्याप्तिविशिष्टपक्षधर्मता. Does this latter definition differ from that noted above? In other words, does पक्षधर्म differ from what we have called the हेतु? Really not, for पक्षधर्मता is nothing more than a particular kind of हेतुता; or rather it is हेतुता under particular circumstances. It is not any हेतु that

will give rise to परामर्श, but only such a one as besides being व्याप्तिविशिष्ट is also पक्षधर्मताविशिष्ट. As a matter of fact a हेतु is always व्याप्तिविशिष्ट and is already stated to be so in the व्याप्तिवाक्य, just as in the major premise of the Aristotelian sylogism. When for instance we say यत्र यत्र धूमस्तत्र तत्र वह्निः or "all men are mortal," we always lay down the invariable concomitance of धूम and वह्नि or humanity and mortality; that is we state धूम to be वह्निव्याप्यता(व्याप्ति)विशिष्ट, and मनुष्यत्व to be मर्त्यत्व-व्याप्तिविशिष्ट. But this alone is not sufficient to produce a new conclusion, for besides the major we also require a minor premise in which the range of हेतु is restricted, that is, we speak of it not generally as in the major premise, but in connection with a particular place or a particular occasion only. Hence in addition to being व्याप्तिविशिष्ट, the हे must also be qualified by another limitation, namely पक्षधर्मता (the fact of its being a property of पक्ष or place). (For a proper conclusion therefore the हेतु must be व्याप्तिविशिष्ट, and must also be known as a धर्म residing in पक्ष; in other words it must be known to be invariably associated with the साध्य, and must also be cognized as being in a particular place (पक्ष).) So that we have two separate cognitions respectively expressed by Aristotle's major and minor premises, namely, that the हेतु is invariably concomitant with साध्य and that it exists in a particular place. These separate cognitions combined together produce the joint cognition that that हेतु which is known to be invariably concomitant with साध्य exists in the particular place; or to take a concrete example, that the smoke which is known to be वह्निव्याप्य exists on the mountain. This joint cognition वह्निव्याप्यधूमवान् पर्वतः which is formed by the combination of the two independent cognitions of हेतु as पक्षधर्म and as व्याप्तिविशिष्ट is called परामर्श. *Annambhaṭṭa's* definition of परामर्श however requires some further elucidation before it can be fully understood.

Comparison of the Aristotelian with the Naiyayika syllogism.

5. The preceding remarks are equally applicable to both the Aristotelian and the *Naiyâyika* syllogistic systems; and they are intended to show that both systems though widely differing in their ultimate forms are really founded on identical analysis of our thinking process. The

two systems materially agree with each other until we arrive at the two cognitions expressed by Aristotle in the form of major and minor premises, and by the *Naiyâyikas* as व्याप्ति and पक्षधर्मता respectively. But from this point they diverge, chiefly on account of their different ways of combining these two cognitions; and the divergence though slight at first ultimately leads to the different forms of syllogism in the two systems. Aristotle first cognises हेतु as invariably concomitant with साध्य (in the major premise), and then finds this invariably concomitant हेतु in a particular place in the minor; that is, he first makes sure of व्याप्ति as a general truth, and then determines the existence of this साध्यव्याप्यहेतु on the पक्ष. The *Naiyâyika* reverses the order, by first determining the हेतु on पक्ष, and then joining to it the notion of invariable concomitance which being derived from past experience is remembered as soon as the हेतु is perceived on the पक्ष. In Aristotle's system, व्याप्ति is determined first and then पक्षधर्मता; in *Nyâya* first पक्षधर्मता of the हेतु is known and then the recollected notion of व्याप्ति is added to it. To adopt Sanskrit terminology, the combination of the two notions, *i. e.* the परामर्श, is expressed in *Nyâya* as व्याप्तिविशिष्टपक्षधर्मता; while Aristotle would probably have described it as पक्षधर्मताविशिष्टव्याप्ति, if of course he had laid down any third premise corresponding to परामर्शवाक्य. As a matter of fact we do not find this last form in Aristotle's syllogism, because the mixture of the two notions of व्याप्ति and पक्षधर्मता designated परामर्श is only implied and not expressed in the Aristotelian inference. If however we introduce a premise into the latter syllogism corresponding to परामर्श, we shall find that it assumes exactly the form indicated above, viz. पक्षधर्मताविशिष्टव्याप्ति. Take for example:—

All men are mortal;
Socrates is a man;
Socrates is mortal.

A *Naiyâyika* will put this as:—

Humanity (मनुष्यत्वं) is invariably concomitant with mortality (मर्त्यत्वव्याप्यं);

There is humanity in Socrates;
∴ There is mortality in Socrates.

This syllogism is defective according to *Nyâya*, because just before the conclusion there is wanting a step combining the two premises into one proposition. This परामर्श would be "the humanity in Socrates is invariably concomitant with mortality;" that is, we cognize मनुष्यत्व not as मर्त्यत्वव्याप्य generally, but as मर्त्यत्वव्याप्य in a particular individual Socrates. In other words, the व्याप्ति which was first universal is here limited by पक्षधर्मता, *i. e.* पक्षधर्मताविशिष्टव्याप्ति. On the other hand, the same argument put in the *Nyâya* syllogism would be:—

देवदत्तो मर्त्यः (मर्त्यत्वविशिष्टः) ।
मनुष्यत्वात् ।
यो यो मनुष्यः स मर्त्यत्वविशिष्टः । यथा यज्ञदत्तः ।
तथा चायं देवदत्तः (मर्त्यत्वव्याप्यमनुष्यत्वविशिष्टः) ।
तस्मात्तथा (देवदत्तो मर्त्यः) ।

The only difference between this and former syllogism is that here in the fourth step *i. e.* परामर्श we predicate मर्त्यत्व-व्याप्यमनुष्यत्वविशिष्टत्व of देवदत्त, while in the former we predicated मर्त्यत्वव्याप्यत्व of देवदत्तनिष्ठमनुष्यत्व. The result of course is the same, and the conclusion is as valid in the one as in the other syllogism.

6. The above distinction between the forms of the Aristotelian syllogism and Sanskrit *Nyâya* is no doubt rather subtle, and cannot be fully grasped by a student in a preliminary stage; but it is very important as it explains the peculiar form assumed by the syllogism of the *Naiyâyikas*. It is referred to here in order to show the exact significance of *Annambhaṭṭa's* defintion of परामर्श. The *Naiyâyika* अनुमिति is essentially based on परामर्श, and the form of परामर्श is largely

due to the peculiar structure of the *Nyâya* syllogism. The necessity and the form of the परामर्श have been much criticized by writers imperfectly acquainted with the *Nyâya* system; but the above analysis will show that परामर्श is not only natural, but absolutely essential in every process of inference. Only that it must be looked at from its proper standpoint. Persons accumstomed to Aristotle's syllogism find it difficult at first to comprehend the *Nyâya* theory of inference, involved as it is in endless technicalities and intricacies extremely puzzling to beginners. These technicalities however are not meaningless; on the contrary they will be found on a proper examination to be the result of a deep and far-reaching analysis of our process of thinking. To understand the Indian logical method, it is quite necessary to view all its parts in their proper light. The above comparison of the Indian and Aristotelian syllogisms will therefore be useful as showing how both, though starting from the same common principles, differ in their outward form owing to a difference in the manner of applying those principles.

What is Anumiti.

7. अनुमितिः—The gist of अनुमान has been succinctly put by *Keśava Miśra* in the following statement, अनुमानस्य द्वे अङ्गे व्याप्तिः पक्षधर्मता चेति । तत्र व्याप्त्या साध्यसामान्यसिद्धिः । हेतोः पक्षधर्मताबलात् साध्यस्य पक्षधर्मत्वाविशेषः सिध्यति । * This means that of the two parts of an अनुमान, व्याप्ति and पक्षधर्मता, the first proves the invariable association of साध्य with हेतु in general, while the latter proves the same on पक्ष. The inference therefore consists in proving existence of साध्य on पक्ष from that of हेतु. *Vâtsyâyana* explains the derivation of अनुमान as मितेन लिङ्गेनार्थस्य पश्चान्मानम्, the 'subsequent ascertaining of a thing (साध्य) from a sign already known.† The same scholiast defines अनुमान as लिङ्गलिङ्गिनोः संबंधदर्शनम् ‡ or rather प्रत्यक्षेण अप्रत्यक्षस्य संबंधस्य प्रतिपत्तिः. The last definition is certainly the simplest, though not very accurate. It describes अनुमान as the process by which from the *perceived* we get at the knowledge of an associated

* T. B. Ben ed. p 41. † *Vat* on. G. S. I, I, 3.
‡ *Vat*, on. G. S. 1, 1, 5, *Ibid* II, 2, 2.

unperceived. It is free from some objections to which *Annambhatta's* definition is liable. One such objection is noted and answered by T. D., namely, that the definition of अनुमिति (परामर्शजन्यज्ञानत्वं) would extend to संशयोत्तरप्रत्यक्ष, which too is produced by a kind of intermediate परामर्श. When one sees indistinctly some elongated substance standing at a distance, one first doubts whether it is a post or man. Then the observer examines it carefully, and on perceiving hands and feet to it he concludes that it is a man and not a post. This last conclusion ought to be an अनुमिति for it is derived from a हेतु, करादिमत्त्व. We reason पुरुषत्वविशिष्टोऽयम् । करादिमत्त्वात् । यो यः करादिमान् स स पुरुषः । यथा देवदत्तः । and so on. This would be an अनुमिति, although we usually call it प्रत्यक्ष because we actually perceive the man after the intermediate reasoning. *Vâtsyâyana's* definition would obviously exclude it, for here although we reason we do not infer an *unperceived* thing from the *perceived*, both पुरुष and करादि being actually perceived. The answer given by T. D. is somewhat different. Similarly there will also be अतिव्याप्ति on सविकल्पकज्ञान which is got after some sort of an unconscious process of reasoning. We first see a thing indistinctly and cognize its property कम्बुग्रीवादिमत्त्व separately; then we infer from the latter that the thing is a jar. (Similarly cognitions derived from उपमान and शब्द also fall under अनुमान and are actually so included by the *Vaiśeshikas* and *Bauddhas.*) But we cannot include these cognitions under अनुमिति for they give rise to a different consciousness (अनुव्यवसाय) such as साक्षात्करोमि or उपमिनोमि while in an अनुमिति the consciousness is अनुमिनोमि. The definition of अनुमिति is therefore faulty, in as much as it applies to cognitions that are not अनुमिति. T. D. gives one answer to both this and the former objection, *viz.* that although there is परामर्श in संशयोत्तरप्रत्यक्ष, it is not accompanied by पक्षता which is a necessary condition of an

inference. It is therefore necessary to understand what पक्षता really signifies.

Pakshatâ.

8. पक्षता:—An inference has been already described as the application of a general truth to a particular instance.' When we infer that Socrates is mortal, we simply realize in Socrates that property of mortality which we already know generally as being invariably associated with humanity. This particular instance is called पक्ष and may be an individual, a substance, a place or any other thing, of which an inferrible property can be predicated. पक्षता is the characteristic which distinguishes the पक्ष for the time being, from other things of the same or of different nature. Thus any mountain is not पक्ष, but it becomes one as soon as we observe smoke on it, and desire to infer fire therefrom. पक्ष is first defined as सिद्ध्यभाववान्, 'possessing the non-ascertainment of a thing,' that is, having on it a thing (साध्य) which is unascertained but which is to be inferred. Why not then simply say साध्यवान् पक्षः, rather than saying सिद्ध्यभाववान् पक्षः ? Because although the पक्ष, as a mountain for instance, may have fire on it, we do not know it at first. In the beginning we simply know that the fire is not ascertained, that is, we know of the non-ascertainment of the साध्य (सिद्ध्यभाव); but not of the साध्य itself. Where fire is actually perceived its existence is ascertained and there is no knowledge of non-ascertainment, and consequently no पक्षता. But suppose we desire to infer fire from smoke even though we know of its existence from another source. There is no सिद्ध्यभाव here, but the inference would be still valid. In a परार्थानुमान again the साध्य is already previously ascertained by the speaker; and so if पक्षता were simply defined as सिद्ध्यभाव all such inferences would be excluded. The ascertainment (सिद्धि), therefore, the absence of which constitutes पक्षता, is qualified as being that which is accompanied by सिषाधायिषाविरह 'absence of any desire to infer.' The compound सिषाध°–भावः is to be dissolved as सिषाधयिषाविरहसहकृता या सिद्धिः तस्या अभावः, and not °सहकृतो यः सिद्ध्यभावः; that is, for पक्षता there is required not only an

absence of सिद्धि, but also an absence of सिषाधयिषाविरह, or rather the absence of a सिद्धि which is सिषाधयिषाविरहसहकृत. In a परार्थानुमान or in the case above mentioned where fire though actually perceived is sought to be proved by inference, although there is the सिद्धि, it is not accompanied by सिषाधयिषाविरह; and consequently there is still an अभाव of such a सिद्धि as is सिषाधयिषाविरहसहकृत. This latter अभाव results from the non-existence of either of its constituents (*viz.* सिषाधयिषाविरह or सिद्धि), and exists both where there is no सिद्धि as in an ordinary अनुमान, and also where there is सिद्धि but there is no सिषाधयिषाविरह, *i. e.* where there is सिषाधयिषा. Of the two conditions therefore mentioned above, namely, non-ascertainment of साध्य and a desire to infer, either may suffice to constitute पक्षता. In a संशयोत्तरप्रत्यक्ष there is no such पक्षता, because the man and his करादि being perceived simultaneously there is no साध्य left to be ascertained and also no desire to infer it.* The above definition of पक्षता which is taken by *Annambhatta* from *Tattva-Chintâmani* of *Gangeśa* is the most common one; but it is open to an objection. When a man in the interior of the house hears a loud noise in the sky, he at once concludes it to be thunder. This is undoubtedly an inference, but there is no पक्षता according to the above definition, because there is no सिद्ध्यभाव, the ascertainment of thunder instantly following the hearing of the sound; nor is there any सिषाधयिषा on the part of the hearer, as there is no sufficient interval between the hearing and the अनुमिति for such a desire to arise. The whole operation is instantaneous and almost involuntary. *Annambhatta's* definition would have the effect of excluding such inferences from the class of अनुमिति. Nor can they be प्रत्यक्ष, because the hearer being in the interior of the house never sees the clouds. Hence N. B. on Sect. 51, having stated the objection, remarks: प्राचीनलक्षणं विहाय नवीनैरनुमित्युद्देश्यत्वं पक्षत्वमिति स्थिरीकृतम्. This new definition of पक्षता adopted by the moderns in preference to the one accepted by *Annambhatta* is अनुमित्युद्देश्यत्व[illegible]प्रयोजकत्वम्, which being very wide is not likely to exclude any thing

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As regards the time-honoured definition it is necessary to add a remark of S. M. सिषाधयिषाविरहकाले यादृशासिद्धिसत्त्वेनानुमितिस्तादृशी सिद्धिर्विशिष्य तत्तदनुमितिप्रतिबन्धिका वक्तव्या, * that is, the ascertainment spoken of must be of the particular sort intended in the inference, so that although one might have ascertained fire upon a mountain from light, he should not be further debarred from inferring the same fire from smoke. In Sect. 51 further on पक्ष is defined as संदिग्धसाध्यवान्, 'a thing on which the existence of साध्य is doubted;' but the definition does not differ from the one given above as the word संदिग्ध implies both the absence of सिद्धि and the presence of सिषाधयिषा. †

Paksha-dharmatâ.

9. पक्षधर्मता.—पक्षता being thus determined, it will be comparatively easy for the student to understand पक्षधर्मता the knowledge of which is said to constitute परामर्श. It is defined as (हेतोः) पक्षवृत्तित्वम् ‡ or पक्षसंबंधः (V. V.) 'the residence of हेतु on पक्ष;' but this does not convey the idea accurately. There are many things on the mountain such as trees and stones, but smoke alone is called पक्षधर्म because smoke alone leads to the inference of fire in the particular case. There may be other things such as light or burnt-up ashes which may equally conduce to an inference of fire; but they are irrelevant in an inference from smoke, and so are not पक्षधर्म. Again as all things on the mountain are not पक्षधर्म, so all smoke in the world is not also पक्षधर्म, although the whole of it be वह्निव्याप्य. Only that particular line of smoke which is seen issuing from the top of the mountain is पक्षधर्म, because the knowledge of that alone is effective in giving an inference of fire on the mountain. All our previous knowledge about the invariable concomitance of smoke and fire will avail us nothing if we do not observe a particular धूमरेखा

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* S. M. Calc. ed. p. 69.

† For further remarks see Note on Sect. 51 *infra.*

‡ B. P. 69.

on the top of the mountain. This is the reason, as has been already pointed out, why परामर्श is defined as the knowledge of पक्षधर्मता, and not that of हेतु merely; for it is not any smoke but smoke when cognized as a धर्म of the पक्ष that produces अनुमिति. Nor is it sufficient to cognize smoke on any mountain, but the cognition must take place on a mountain which is a पक्ष, that is, which possesses the पक्षता as above defined. Hence पक्षधर्मता may be fully defined as पक्षतावच्छेदकावच्छिन्नविषयता which is paraphrased as सिषाध°—सिद्ध्यभावरूपा या पक्षता तस्या अवच्छेदकं यत्पर्वतत्वं तेनावच्छिन्नो विषयो यस्य स धूमस्तत्ता, 'the smoke as conditioned by the mountain which determines in this case the sphere of पक्षता.' The knowledge of smoke so conditioned leads to अनुमिति when additionally qualified by a knowledge of the व्याप्ति. व्याप्तिविशिष्टपक्षधर्मताज्ञानम् cannot be dissolved, says *Nīlakaṇṭha*, as व्याप्तिविशिष्टे या पक्षधर्मता तस्य ज्ञानम्, 'cognition of पक्षधर्मता in a smoke that is already known to be वह्निव्याप्य.' This would accord with Aristotle's method, as has been already pointed out, which first states the व्याप्ति in the major premiss, and then realizes it in the thing denoted by the minor term; but such a dissolution, says *Nīlakaṇṭha*, would exclude an inference of the व्यतिरेकि kind which is always based on a contrary negative concomitance, and in which the पक्षधर्मता belongs not to the thing which is व्याप्तिविशिष्ट but to it contradictory. The compound therefore must be taken as a कर्मधारय, being dissolved व्याप्तिविशिष्टं च तत्पक्षधर्मताज्ञानं च, 'knowledge of पक्षधर्मता as qualified by the (knowledge of) व्याप्ति.' Mere knowledge of पक्षधर्मता is obtained by perception when one sees the line of smoke on the mountain-top, but it alone does not produce अनुमिति. It becomes परामर्श when combined with a knowledge of व्याप्ति after व्याप्तिस्मरण. Hence the remark of T. D. व्याप्तिविषयकं यत्पक्षधर्मताज्ञानम्. Technically expressed व्याप्ति is not a विशेषण of पक्षधर्म (smoke), but a प्रकार of the पक्षधर्मताज्ञान; it is a property of the perceptive knowledge of smoke on the mountain, and not a quality of the smoke

itself. The reason is obvious. व्याप्ति is a subjective conception, not a material quality residing in an external object such as smoke. धूम itself cannot therefore be व्याप्तिविशिष्ट, but धूमज्ञान can be व्याप्त्यवच्छिन्नप्रकारतानिरूपित. Hence the complete definition of परामर्श is व्याप्त्यवच्छिन्नप्रकारतानिरूपित -पक्षतावच्छेदकावच्छिन्न-विशेष्यताशाली निश्चयः (*Nil.*). This परामर्श is illustrated in the cognition वह्निव्याप्यधूमवान् पर्वतः, which always precedes the अनुमिति 'पर्वतो वह्निमान्.'

English equivalents.

10. There is no English word which can convey the exact notion of परामर्श. Ballantyne translates it by 'logical antecedent' but the rendering is not appropriate. The expression 'logical datum' is also not very happy as it implies that परामर्श is an assumption made to serve a logical purpose, and is not a necessary step in every natural process of thinking. The word परामर्श etymologically means *consideration*, but the latter word does not convey the full idea of परामर्श as used by the *Naiyâyikas*. It is however issued by Roer and Max-Müller,, and I have adopted it for want of a better one. For अनुमिति I have adopted the term *Judgment* on the authority of Whately,* while its instrument the अनुमान is denoted by *Inference*. व्याप्ति is 'invariable concomitance', and not 'pervading inherence' as Roer renders it, because it is not an inhering attribute of a material object, but a relation of the *notions* of two things. There is a difficulty about the proper rendering of पक्ष. It is not correct to translate पक्ष by 'minor term', as Roer and others probably misled by notions of Aristotelian logic, have done. 'Minor term' would be a proper equivalent for पक्षवाचक शब्द, and not for पक्ष itself. The rendering of पक्ष by 'subject' is perhaps better, as पक्ष like Aristotle's minor term is the subject in the conclusion, but it also is liable to misapprehension. I have therefore contented myself with the ordinary word 'place' to express the idea of पक्ष. For the same reason it is misleading though not positively incorrect to translate हेतु by

* Whately *Elements of Logic* Bk. ii, Ch. 1, 1.

'middle term,' as some have done. हेतु or rather हेतुवाक्य, as a part of the five-membered syllogism, can best be rendered by 'reason,' and corresponds to minor premiss, while लिङ्ग can be translated by 'sign.' Terms of the formal syllogism ought not to be indiscriminately applied to things which form part of the previous process of thinking. The same caution is required in applying other terms derived from European logic to their Sanskrit counterparts.

11. व्याप्तिः—The word व्याप्ति is perhaps the most difficult as it is also the most important term occurring in connection with the subject of inference. व्याप्ति has been translated as *invariable concomitance*; and the author defines it in the text as साहचर्यनियमः (invariability of concomitance) which means the same. But what does *concomitance* mean, and what does its *invariability* signify? The illustration (अभिनय) of व्याप्ति, "Wherever there is smoke there is fire," gives no doubt some idea of this invariable concomitance, but it does not furnish us with a sure test as to how व्याप्ति is to be found out and under what conditions it is valid. We must therefore further analyze the two notions involved in a व्याप्ति, viz. that of साहचर्य 'co-existence' or 'concomitance,' and that of 'universality' or rather the 'invariability' of this साहचर्य. साहचर्य is the सामानाधिकरण्य, co-existence in one and the same place, of हेतु and साध्य; and when this coexistence of one thing with another is observed wherever the other thing exists, the साहचर्य is called नियत (नियमेन वर्तमानं) or invariable, and the thing so found co-existing is said to be व्यापक of the other thing. Thus fire is always found where smoke exists, and is therefore व्यापक of धूम; while as smoke is not always observed along with fire as in a red-hot iron-ball, smoke is not the व्यापक of वह्नि. There is no doubt a व्याप्ति between fire and smoke, but the व्याप्ति is of fire on smoke, and not *vice versa*; for fire, besides existing in all places occupied by smoke, exists in others

where there is no smoke, and is thus more extensive. The व्याप्ति therefore not only means co-existence or concomitance, but also involves the idea of a greater extent. A व्यापक is generally greater in extent than the व्याप्य, though not necessarily so; for in the exceptional case where both may be co-extensive, both are व्यापक and व्याप्य of each other. To cover this exceptional case *Naiyâyikas* define व्याप्ति simply as invariable co-existence, which is of course found both when the साध्य is greater than or equal in extent to the साधन.

12. The words *extent* and *extensive* are ambiguous as they are likely to be misunderstood in the sense of volume such as bulk or quantity or area. Thus a field of 20 acres would be said to be more extensive than another of 10 acres as it would include the latter and would still leave some of its parts unoccupied; but it is not व्यापक in the sense in which the term is used in *Nyâya*. This will be clear by another example. Of the two sums of 100 and 50 rupees respectively, the larger obviously includes the smaller, but a *Naiyâyika* would call the smaller sum the व्यापक of the larger, because it is found in a greater number of places than the other. The number fifty exists wherever there is the hundred, and in many other places besides, *e. g.* where there are numbers between fifty and hundred. If, for instance, we bring together twenty people having salaries above fifty, of whom only five get hundred rupees or more, the sum of hundred occurs in five instances only, while that of fifty is found in twenty. Fifty invariably co-exists with hundred, but not *vice versa*; and hence the *Naiyâyikas* would say that fifty is the व्यापक संख्या and hundred the व्याप्य संख्या. Any inference from hundred as a हेतु to fifty as a साध्य, such as A has fifty cows because he was seen with a hundred, would therefore be valid, so far as व्याप्ति is concerned. Of course these being *immediate* inferences, they may not perhaps be called deductions proper, but the व्याप्ति is true all the same. व्यापकत्व therefore, though primarily involving the ideas of extension and inclusion, is often the opposite of them; for it is not

the bigness of the thing itself, but the number of instances in which it is found that makes it व्यापक. Hence व्याप्ति is defined in terms of co-existence or concomitance, and not as extension or pervasion.

13. Except in the rare case where हेतु and साध्य are co-extensive, व्याप्ति is a unilateral relation between them; that is, if any two things are taken, one of them is at once determined to be the व्यापक of the other, and their व्याप्यव्यापकभाव does not vary so long as the two things are taken in the same sense and with the same qualifications. The साहचर्यनियम is therefore the invariable co-existence of व्यापक with the व्याप्य and not *vice versa*; and as in a valid inference, the साध्य must always be the व्यापक of हेतु, that is, must be more extensive than or at least co-extensive with the हेतु, the definition of व्याप्ति in T. S. must obviously be taken in a limited sense. This limitation is fully brought out in the enlarged definition of व्याप्ति given by T. D., हेतुसमानाधिकरणात्यंताभावाप्रतियोगिसाध्यसामानाधिकरण्यम्, which is explained by *Nīlakaṇṭha* thus: वह्निमान् धूमादित्यादौ (सद्धेतौ) धूमसमानाधिकरणो योऽत्यन्ताभावः (घटात्यन्ताभावः) तदप्रतियोगी (वह्निः), तत्सामानाधिकरण्यं धूमेऽस्ति, इति कृत्वा लक्षणसमन्वयः। The सामानाधिकरण्य, according to this definition, is of the साध्य on the हेतु, *i. e.* of the व्यापक on the व्याप्य. But how do we know that the साध्य is the व्यापक? To clear this doubt a qualification is added to the साध्य, that it must be 'a thing which is not a counter-entity (प्रतियोगी) of any absolute negation (*i. e.* an absolute negation of anything) co-existing with the हेतु.' Smoke for instance can co-exist with the अत्यन्ताभाव of घट, or पट, or in fact of every thing that is not necessarily associated with it; and hence those things are counter-entities of हेतु°—°भाव, while fire is not so, because there can be no smoke in the absence of fire. The expression समानाधिकरणात्यन्ताभावाप्रतियोगि is nothing but a paraphrase of the word नियम which occurs in T. S., for the invariable presence of a thing is the same as the absence of its co-existent negation. Commentators however are not satisfied even with this circum-

locution, for there is still a doubt as to whether the हेतु and साध्य are all things denoted by the words or only individual things referred to on particular occasions; or in other words, whether the smoke said to be वह्निव्याप्य is smoke in general, or the particular धूमरेखा observed on the mountain. That the former meaniug is to be taken is made clear by the insertion of the word अवच्छिन्न; and the definion is thus enlarged: हेतुसमानाधिकरणात्यंताभावप्रतियोगितानवच्छेदक-साध्यतावच्छेदकावच्छिन्न — साध्यसमानाधिकरणवृत्ति — हेतुतावच्छेदकत्वम् (*Nil.*). व्याप्ति is thus a धर्म of हेतु (हेतुतावच्छेदक), residing (वृत्ति) in a thing co-existent with a साध्य that is distinguished (अवच्छिन्न) by an अवच्छेदकधर्म (वह्नित्व) which characterizes the साध्य (*i. e.* resides in the साध्य), but does not pertain to a प्रतियोगि (प्रतियोगितानवच्छेदक) of any of the (countless) absolute negations coexisting with हेतु (धूम). This frightful periphrases is intended to signify nothing more than that the व्याप्यव्यापकभाव lies between the *generalities* of fire and smoke and not between the individual वह्नि and धूम; that is, fire is the व्यापक of smoke as fire in general, and not as a particular fire in the kitchen or the hearth.

Various definitions of Vyâpti.

14. Before adverting to the question how this व्याप्ति is known, it may be useful to consider a few definitions of व्याप्ति, given by other writers, in order to further elucidate the *Naiyâyika* notion of व्याप्ति, as well as to indicate briefly the general character and drift of the endless controversies carried on about it. There is in fact no other single topic in the *Nyâya* philosophy, which has evoked such an amount of subtle hair-splitting from scholastic dispuntants, as the definition of व्याप्ति. Whole works have been written for the purpose of settling a correct definition, and every writer of some pretensions has endeavoured to start a separate school advocating a particular definition. *Viśvanâtha* gives two definitions of व्याप्ति, of which he prefers the second. He first defines व्याप्ति as साध्यवदन्यस्मिन्नसंबंधः 'absence of the हेतु on any thing except the one having साध्य.'* But this

definition is अव्याप्त as it does not apply in a केवलान्वयि अनुमान, such as इदं वाच्यं ज्ञेयत्वात्, where वाच्यत्व and ज्ञेयत्व being properties of all knowable things, there is no object that can be called साध्यवद्न्य, and hence व्याप्ति in such cases cannot be known. Consequently this definition of the ancients is abandoned by modern writers. The other definition of *Viśvanātha* is हेतुमन्निष्ठविरहाप्रतियोगिसाध्यैकाधिकरण्यम् * which is identical with the one given by T. D., हेतुमन्निष्ठविरह corresponding to हेतुसमानाधिकरणात्यंताभाव. Here also, as in T. D's definition, the साध्यधर्म is to be understood as प्रतियोगितानवच्छेदक and साध्यतावच्छेदक. † Again the सामानाधिकरण्य is to be by the same संबंध such as either समवाय or संयोग. Otherwise fire not residing in the parts of smoke by intimate union will not be समानाधिकरण with it. Now, an objector may ask, will not the definition be inapplicable to an inference like अयं कपिसंयोगी, एतद्वृक्षत्वात् । where संयोग being an अव्याप्यवृत्ति गुण, both it and its अभाव are समानाधिकरण with the वृक्षत्व of the tree? The answer is no, because it is a rule that अभाव and its प्रतियोगी are never एकाधिकरण. In this way rival disputants go on starting and answering objections, most of which are technical and scarcely add to the knowledge of the student.

Kinds of Vyāpti.

15 व्याप्ति is divided into two sorts, अन्वयव्याप्ति and व्यतिरेकव्याप्ति, of which the first again is of two kinds, पूर्वपक्षव्याप्ति and सिद्धान्तसिद्धव्याप्ति. ‡ अन्वयव्याप्ति is the one already explained, where साध्य has नियतसाहचर्य with हेतु. Its two sub-divisions पूर्वपक्षव्याप्ति and सिद्धान्तसिद्धव्याप्ति seem to be invented chiefly for dialectical purposes, and are of no scientific value. Each of these classes comprises a number of definitions arranged on a system of gradation, the simpler preceding the more difficult. Of these the सिद्धान्तसिद्धव्याप्तिs are comparatively few and simple; but the other class comprises those on

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* P. B. 68.

† See p. 85 l. 4 and the preceding Note 13 on p. 248. *Supra.*

‡ B. P. 141-3.

which Indian schoolmen like *Raghunâtha* and *Gadâdhara* have exhausted their whole dialectical ingenuity. The class of पूर्वपक्ष-व्याप्तिs comprises in all twenty one definitions, of which five form one group called पञ्चलक्षणी, fourteen another group called चतुर्दशलक्षणी, and the last two are independent, having the quaint names सिंहलक्षण and व्याघ्रलक्षण respectively. The five definitions in पञ्चलक्षणी together with the last two being, like the first of *Viśvanâtha* noticed above, based on the भेद or अभाव of साध्य do not apply to केवलान्वयि inferences, and are accepted only by the school of *Gaṅgeśa*. The fourteen definitions comprising चतुर्दशलक्षणी are applicable to all the three kinds of inferences, as they are based on the doctrine that things might be as well defined by properties they do not possess as by those they do. The doctrine was first enunciated by *Saundadopâdhyâya*, and is technically known as व्यधिकरणधर्मावच्छिन्नाभाव. These details are quite sufficient to frighten away an ordinary student from the tangled web of dialectic subtility, named व्याप्तिवाद, that has been woven round the broad and quite intelligible rule, नियतसाहचर्यं व्याप्तिः. *Annambhaṭṭa* has wisely kept clear of all this mass of superfluous refinement by contenting himself with a simple definition suited to a manual for beginners.

Anvaya-vyâpti and Vyatireka-vy-âpti.

16. The other kind of व्याप्ति is व्यतिरेकव्याप्ति and is the converse of the अन्वयव्याप्ति. व्यतिरेकव्याप्ति is explained by S. C. as व्यतिरेकः साध्याभावहेत्वभावयोः साहचर्यम् तत्प्रयोज्या (व्यतिरेकेण) व्याप्तिः. Every अन्वयव्याप्ति has a व्यतिरेकव्याप्ति corresponding to it, because if व्याप्यव्यापकभाव exists between हेतु and साध्य, it must also exist between their negations taken in the inverse order. Thus if the proposition यत्र यत्र धूमस्तत्र तत्र वह्निः is true, its converse यत्र यत्र वन्ह्यभावस्तत्र तत्र धूमाभावः must also be true. The difference between the two is that while in अन्वय व्याप्ति, साध्य is व्यापक and हेतु व्याप्य, in a व्यतिरेकव्याप्ति the हेत्वभाव becomes व्यापक, and साध्याभाव becomes व्याप्य. In other words the premise stands as if we are actually inferring धूमाभाव, from वन्ह्यभाव. It is clear

therefore that the same proposition यत्र वन्ह्यभावस्तत्रधूमाभावः would be व्यतिरेकव्याप्ति if the resulting अनुमिति is पर्वतो वह्निमान्, and would be an अन्वयव्याप्ति if the अनुमिति is पर्वतो धूमाभाववान्, the हेतु in the latter case being वन्ह्यभाव. *Udayana* accordingly defines व्यतिरेकव्याप्ति as साध्याभावव्यापकीभूताभावप्रतियोगित्वम्, which *Visvanâtha* puts in simple language "साध्याभावव्यापकत्वं हेत्वभावस्य यद्भवेत्."[*] There is much difference of opinion about व्यतिरेकव्याप्ति, which will be noticed when we come to the व्यतिरेकि अनुमान; but it may be remarked here that according to many Indian scholastics, and according to European logicians generally, व्यतिरेकव्याप्ति is not a different व्याप्ति but a mere restatement of the अन्वय obtained by a sort of conversion of the major premise. The process however is not simple conversion, but corresponds to what Prof. Bain calls *Obverted Conversion* or *Contraposition.* The predicate in a Universal Affirmative proposition being always more extensive than the subject, it requires to be either limited or *obverted* when the proposition is converted. Hence the conversion of an A proposition always requires two processes first *Obversion* and then *Conversion.* *Obversion* is the denial of the predicate, while *Conversion* is the transposition of the subject and the predicate. Thus to give Prof. Bain's own example of the *Obvertive Conversion* of an A proposition,†

All X is Y

gives by *Obversion*

No X is not-Y

which by simple *Conversion* (of E) is

No not-Y is X.

Or,

All men are mortal;

by *Obv.*=No men are immortal;

by *Conv.*=No immortals are men.

Now let us put the *Nyâya* stock instance into the general form All X is Y, and we shall see how the same process gives us its व्यतिरेकव्याप्तिः—

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* B. P. 142.

† Bain: *Deductive Logic*, p. 116.

यो यो धूमवान् स स वह्निमान्=All smoking things are fiery;
By *Obv.*=यो यो धूमवान्
स स न वन्ह्यभाववान् =No smoking things are non-fiery;
By *Conv.*=यो यो वन्ह्यभाववान्
स स न धूमवान् or
यो यो वन्ह्यभाववान् स धूमाभाववान्
} =No non-fiery things are smoking.

It will be thus seen that a व्यतिरेकव्याप्ति is only a repetition of the अन्वयव्याप्ति in another form of language, and consequently no change is made in the nature of the proof or in the अनुमिति by its substitution for the अन्वयव्याप्ति. Sometimes and especially in a केवलव्यतिरेकि inference where अन्वयव्याप्ति cannot be had it is very useful, and hence it has been recognized as a distinct species.

SECT. XLV. स्वार्थं परार्थं च

Inference is of two kinds:— One's Own and Another's. Of these One's Own is the source of one's own inference. Since a man having himself ascertained by frequent observation the generalization, wherever there is smoke there is fire as in a kitchen, approaches a mountain, and suspecting fire thereon and seeing smoke on the mountain, remembers the generalization, wherever there is smoke there is fire. Then the knowledge is produced that the mountain has smoke accompanied by fire. This is called Consideration. Thence arises the inference viz. the knowledge that mountain is fiery. This is One's Own inference. When, however, after inferring fire from smoke oneself, a five-membered syllogism is employed to enlighten another person, it is Another's inference: e. g. Mountain is fiery, because it smokes; whatever smokes is fiery, as a kitchen; this is so; hence this is fiery. By this means even another man apprehends fire from a sign (so) propounded.

Inference for oneself and for another.

1. The division of अनुमान into स्वार्थ and परार्थ, though not found in the aphorisms of *Gotama* or *Kaṇâda* is considerably old, being first mentioned in *Praśastapâda's* scholium. Etymologically स्वार्थ and परार्थ respectively mean what is intended for oneself and what is for another (स्वस्य परस्य वा अर्थः प्रयोजनं यस्मात् तत्); but they can be better named *informal* and *formal*, or primary and secondary respectively. स्वार्थानुमान is useful for removing one's own doubt, while परार्थानुमान is employed when a conviction is sought to be produced in the mind of another. परार्थानुमान therefore presupposes

and is based upon a स्वार्थानुमान, for one man cannot convince another without being first convinced himself. The distinction between the two is founded on the presumption that as in a स्वार्थानुमान we deal with premises immediately known to us and derived from our own experience, we do not require them to be stated with exact formality, while in a परार्थानुमान, the premises which are discovered by one man and imparted to another through the medium of language are liable to be misunderstood or misconstrued, and therefore require to be stated with precision. The speaker cannot express himself fully and clearly, or the hearer may be incapable of comprehending his meaning, or he may be misled by his own pre-conceived notions, or the words used may be ambiguous or incorrect, too general or too narrow in sense. There is in fact a greater likelihood of what we call fallacies of language being committed and other fallacies being disguised in a परार्थ than in a स्वार्थ अनुमान; and hence the condition is laid down in the former that each proposition must be stated in a prescribed form. The etymological sense of the two words has therefore merged into the later and more intelligible distinction between the two kinds of inference, namely, that परार्थानुमान is syllogistic or formal, and स्वार्थ is the opposite of it. N. B. defines them as न्यायप्रयोज्यं and न्यायाप्रयोज्यं respectively, meaning that न्याय or syllogism is essential to a परार्थ but not to a स्वार्थ अनुमान. Similarly *Dharmottarâchârya*, the commentator on *Nyâya-Bindu*, remarks परार्थानुमानं शब्दात्मकं । स्वार्थानुमानं तु ज्ञानात्मकमेव ।.* *Praśastapâda* also says पञ्चावयवेन वाक्येन स्वनिश्चितार्थप्रतिपादनं परार्थानुमानम् । †

2. Of the two kinds the term अनुमान is properly applicable to the स्वार्थ only, for it is the real करण of अनुमिति. Whether we take the अनुमितिकरण to be लिङ्गज्ञान, व्याप्तिज्ञान or परामर्शज्ञान, it is undoubtedly ज्ञानात्मक as the स्वार्थ is, while परार्थ being शब्दात्मक should naturally fall under शब्दप्रमाण. But परार्थानुमान is included under अनुमान for the sake of convenience. The explanation given by the author of *Nyâya-Bindu* is कारणे कार्योपचारात्, 'the word अनुमान is used in a second-

* *Nyâya-Bindu-Tika* Bill. Ind. p. 21.

† P. B. ed. p. 231.

ary sense to denote परार्थ which is वचनात्मक because the वचन (syllogism) is the cause of conveying to the hearer's mind लिङ्गज्ञान which is the real अनुमान.' The अनुमिति in a परार्थानुमान is the notion पर्वतो वह्निमान् generated in the hearer's mind. This notion is not conveyed to him directly by words as in शाब्दबोध, but he is made to infer it from a previous notion similarly conveyed by words वह्निव्याप्यधूमवान् पर्वतः. This latter notion exactly corresponds to the परामर्श in a स्वार्थानुमान, and is likewise a combination of व्याप्ति and पक्षधर्मताज्ञान. Hence the definition of अनुमिति, viz. परामर्शजन्यं ज्ञानम् applies to a vicarious (परार्थ) judgment as much as to an original (स्वार्थ) one. The real करण of this परार्थानुमिति is then the notion of परामर्श or व्याप्ति or लिङ्ग as comprehended by the hearer; but we have no knowledge of this notion except through the न्याय or syllogism which produced it. Hence the अनुमितिकरणत्व which really belongs to the notion in the mind of the listener is attributed to its cause the पञ्चावयववाक्य by a sort of लक्षणा or उपचार. *Nīlakaṇṭha* therefore remarks:—यद्यपि परार्थानुमानशब्दस्य परस्य मध्यस्थस्यार्थः प्रयोजनं साध्यानुमितिरूपं यस्मादितिव्युत्पत्त्या परसमवेतानुमितिकरणलिङ्गपरामर्शोऽर्थः । अतएव स्वार्थानुमितिपरार्थानुमित्योर्लिङ्गपरामर्श एव करणमित्याद्यग्रिमग्रूलमपि साधु संगच्छते । तथापि परार्थानुमानप्रयोजके पञ्चावयववाक्ये परार्थानुमानशब्दस्यौपचारिकः प्रयोग इति मनसिकृत्य मूलमवतारयति. *Nīlakaṇṭha* means that the author is not inconsistent in calling here the पञ्चावयववाक्य the परार्थानुमान, and again in stating subsequently that लिङ्गपरामर्श is the करण of both स्वार्थ and परार्थ अनुमिति, because the use of the word परार्थानुमान to denote the syllogism is only secondary. Except in this one particular, both kinds of inferences agree in all respects, and the same rules and conditions apply to both equally. The distinction between the two is useful for no other purpose than to emphasize the fact that, though in practice the syllogistic form, *i.e.* the परार्थानुमान, absorbs almost all our attention owing to its being subject to rules of logic, the mental process called स्वार्थानुमान, whether original or induced by words in the hearer's mind, constitutes

the real inferential operation. Practically every mental operation can be clothed in words, while on the other hand every syllogism presupposes a mental inference; so both are one, or rather they form two parts of the same process of inference. Consequently Aristotle takes account of syllogism only, ignoring the स्वार्थानुमिति altogether, and the *Naiyâyikas* also have done the same. Prof. Max Müller is therefore totally wrong when he remarks:—"What is called by *Annambhaṭṭa* the conclusion for oneself, corresponds *totidem verbis* with the first form of Aristotle's syllogism. What is called the conclusion for others seems more irregular on account of its five members, and of the additional instances which seem to vitiate the syllogism." * It appears that Prof. Max Müller like many other Western scholars failed to understand the real significance of the division of स्वार्थ and परार्थ.

3. *Annambhaṭṭa* gives a circumstantial and fairly accurate description of the process by which we first infer fire on a smoking mountain, and then communicate our knowledge to another in the same order. We first observe smoke on the mountain, then suspect that there is fire, and then remember the व्याप्ति; at last joining this व्याप्तिस्मरण with the पक्षधर्मताज्ञान got by actual perception, we obtain the complex परामर्श denoted by वह्निव्याप्यधूमवान् पर्वतः. This परामर्श is variously called लिङ्गपरामर्श or तृतीयलिङ्गपरामर्श S. C. explains the former term as व्याप्तिबलेन लीनमर्थं गमयतीति लिङ्गं तच्च धूमादिस्तस्य परामर्शो ज्ञानविशेषः 'knowledge of लिङ्ग in the peculiar form defined as a परामर्श.' It is also called तृतीयलिङ्गपरामर्श because it is the last of the three cognitions of smoke that are requisite for the inference of fire. The first cognition is the knowledge of smoke as associated with fire in the kitchen room (महानसादौ); the second is the perceptive knowledge of smoke on the mountain; and the third is the complex and derived knowledge of the same smoke as invariably concomitant with fire,† This परामर्श necessarily

* Thomson's *Laws of Thought* Appendix p. 293.

† S. C. *loc. cit.* and T. K. Bom. ed. p. 10-1.

gives birth to स्वार्थानुमिति. When this process is put in the form of a syllogism for the edification of another it becomes a परार्थानुमान.

4. There are however other classifications of अनुमान which are based on real distinctions. *Gotama* divides अनुमान into three kinds:—पूर्ववत्, शेषवत् and सामान्यतो दृष्ट.* This division appears to be the most ancient as well as the most generally accepted. पूर्ववत् is पूर्वं कारणं तद्वत्, कारणलिङ्गकमित्यर्थः 'reasoning from cause to effect,' as an inference from the appearance of thick clouds that a shower of rain will ensue, because clouds are known to cause rain. शेषवत् is शेषः कार्यं तद्वत्, कार्यलिङ्गकं यथा नदीवृद्ध्या वृष्ट्यनुमानम्, an inference of a past shower of rain from the overflow of the river, because the latter is known to be the effect of the former. सामान्यतो दृष्ट comprises all other inferences that are neither from cause to effect nor from effect to cause. *Vatsyáyana* adds another interpretation of the words, according to which the distinctive marks of the three varieties differ slightly. According to this second interpretation,† पूर्ववत् is an inference from a precedent, *i. e.*, an inference of one from the other of two things that were formerly observed to be closely associated together. The ordinary inference of fire on the mountain from smoke, and in fact all deductions proper are of this kind. शेषवत् is the inference by elimination, *i. e.* the determination of an object to be something because it is not any other thing, just as sound is proved to be a quality because though a product it is neither substance nor action. सामान्यतो दृष्ट is the deduction of the nature of an invisible thing from a general law previously known, such as the law of causality. Soul for instance is invisible, but its existence is proved by the necessity that बुद्धि and other qualities must reside in a substance according to the

Other divisions of inference.

* G. S. I, 1, 5.

† *Vát.* on G. S. I, 1, 5.

general law that every quality must have a substratum. सामान्यतो दृष्ट is thus in one sense opposed to पूर्ववत्, the latter, as *Vâchaspati* remarks, being दृष्टस्वलक्षणसामान्यविषय, while the former is अदृष्टस्वलक्षणसामान्यविषय.* पूर्ववत् is the inference of an object whose peculiar property (स्वलक्षण), which is also the common characteristic (सामान्य) of its class such as the वह्नित्व of वह्नि, is previously observed (दृष्ट), while the स्वलक्षण of an invisible object inferred by सामान्यतो दृष्ट is never perceived. *Vâchaspati* classes these two kinds under one head, वीतानुमान, that is, an inference through an affirmative generalization (अन्वयव्याप्ति); while शेषवत् differs from them both in being based on a negative generalization (व्यतिरेकव्याप्ति).

5. Another division of अनुमान is into three kinds केवलान्वयि, केवलव्यतिरेकि and अन्वयव्यतिरेकि, the *fundamentum divisionis* being the affirmative or negative character of the हेतु or rather of the व्याप्ति. A *judgment* derived from an अन्वयि हेतु or a व्यतिरेकि हेतु alone is केवलान्वयि or केवलव्यतिरेकि, while one to which both kinds of हेतु are applicable is उभय or अन्वयव्यतिरेकि. The difference between this classification and the former one is that while the former is based partly on the nature of the conclusion or अनुमिति, and partly on the mode of reasoning employed, the latter is entirely based on the character of the करण or हेतु. The distinction of अन्वय and व्यतिरेक pertains to the हेतु alone, and not to the resulting *judgment* which is the same whether derived from an अन्वयि or a व्यतिरेकि हेतु. *Annambhaṭṭa* therefore very properly treats this last classification as a division of लिङ्ग and not that of अनुमान. † The first classification also seems to have rather gone out of fashion with the modern school of *Naiyâyikas*, owing probably to its vagueness and want of a common principle of division. The distinction between स्वार्थ and परार्थ inferences was probably invented by the *Vaiśeshikas*.

6. *Praśastapâda* sub-divides स्वार्थ अनुमान into दृष्ट and

* *Sâṅkhya*-T. K. p. 16.

† See Sect. 48, Notes 3 & 4 p. 287. *Infra*.

सामान्यतो दृष्ट, the difference between the two being that, in दृष्ट the inferred thing is exactly of the same kind as its prototype, as when we infer a cow from our previous knowledge of cows having dew-laps, while in सामान्यतो दृष्ट a property is inferred in a thing from its observation in a quite different kind of thing, as causality is inferred in dead matter because it is observed in animals.* There is probably a confusion of ideas here, for the illustration of दृष्ट is more like a case of सविकल्पप्रत्यक्ष or a mere स्मरण than an inference proper, while the example of the second is only a particular application of the general method of inference as described above.

Induction in the Nyâya system.

7. Having noticed the different kinds of अनुमान mentioned by Sanskrit writers, it will be useful to compare these classifications with those of Aristotle and the modern European logicians. The most obvious defect in the *Nyâya* system and one that has been chiefly dwelt upon by its European critics is the non-recognition of anything corresponding to what we now call inductive reasoning. The same objection formed the gist of Lord Bacon's indictment against Aristotle and the logic of mediæval schoolmen; but a closer study of Aristotle's work has now shown that he did not actually ignore induction but attached less importance to it than we are prone to do now. The same thing is true of the *Nyâya* system. Like Aristotle, *Naiyâyikas* were aware of the inductive method, but considered it as subservient to the purposes of deduction which was the अनुमान proper. Every deduction is based on a generalization, and this generalization is obtained by an accumulation of particular instances by a process known as induction. A *Naiyâyika* would therefore value induction only as a means for discovering व्याप्ति which is necessary for a proper अनुमान. How then is this Induction treated of in the *Nyâya* system? To get an answer to this question we must consider the *Naiyâyika* doctrine as to how a व्याप्ति is obtained.

*P. B. Ben. ed. p. 205.

8. It will be remembered that व्याप्ति was defined as नियतसाहचर्य of हेतु and साध्य; and the exact meaning of this phrase was also explained. But how are we to make ourselves sure of this नियतसाहचर्य? What is in fact the means of arriving at, and the test of determining this invariability of concomitance? *Annambhatta* supplies the answer to this question in Sec. 45. In describing स्वार्थानुमान he says that व्याप्ति is obtained by repeated observation of the association of fire with smoke, or in other words by the accumulation of numerous instances in which this association is found. But this would certainly not suffice to give us a valid व्याप्ति. Observation of a fact, repeated howsoever often, is no guarantee against the possibility of the existence of a contrary fact. We may observe the association of fire and smoke in ninty nine cases, but we cannot from thence conclude that it must exist in the hundredth case also. It is impossible for one man to examine all the cases of a particular nature, and our widest generalizations are therefore based on a limited number of instances. The possibility of a contrary fact, therefore, still remains, and the व्याप्ति remains at best a doubtful hypothesis. To prevent this व्यभिचार, T. D. adds that the knowledge of साहचर्य produces व्याप्ति not by itself, but when combined with the absence of the knowledge of व्यभिचार (contradiction). The नियम of साहचर्य which constitutes व्याप्ति is therefore defined as अव्यभिचरितत्व, 'absence of any contradiction;' that is, in order to know व्याप्ति not only is it necessary to observe the association of fire and smoke in numerous instances, but there must not also be a single instance in which smoke is found dissociated from fire. साहचर्यज्ञान and व्यभिचारज्ञानविरह are therefore the two causes of the knowledge of व्याप्ति, and as such correspond to the Method of agreement and the Method of difference that are employed in Induction. These two are not however collateral or independent causes of व्याप्ति, but the latter is subservient to the first, and both constitute one joint cause. The process therefore closely resembles Mill's Joint Method of agreement and difference.*

Vyâpti.

* Mill: *System of Logic*, People's Ed. p. 259.

Contradictory Instances.

9. Now व्यभिचारज्ञान may be the certainty of a contrary fact or a mere suspicion, because both are equally effective in destroying the certainty of व्याप्ति. Again the व्यभिचारनिश्चय may be well-grounded or ill-grounded ; if the former, it is true, and the व्याप्ति is invalid. If it is ill-grounded, or if there is only a suspicion of व्यभिचार, it can be dispelled either by reasoning or by a sort of intuitive knowledge. Instances of the latter are what we call necessary truths, such as the axioms of Geometry which are self-evident and require no proof. When they are not so they can be proved to be true by the *reductio ad absurdum* method of reasoning which is called तर्क in *Nyâya.** Take for example the व्याप्ति यत्र धूमस्तत्र वह्निः. If this is not true, its contradictory, *viz.* that smoke is sometimes not accompanied by fire, must be true. Then in those cases where smoke is found without fire, it must have for its cause something else. Hence fire is not the invariable antecedent of smoke and it cannot therefore be its cause, which is inconsistent with our knowledge that fire is the cause of smoke. The conclusion being thus absurd, the assumption from which it was derived must be wrong ; and its contradictory, namely the व्याप्ति, must be right. In this way by means of an assumed hypothesis (तर्क), which when carried to its legitimate conclusion leads to कार्यकारणभङ्ग of fire and smoke, we prove the invariable concomitance of those two things. The *reductio ad absurdum* reasoning consists in taking for granted an hypothesis exactly opposite to the proposition to be proved and then drawing from it a conclusion which is evidently false, and the falsity of which vitiates the hypothesis and thus proves its contradictory. In this way व्याप्ति too may be said to be indirectly obtained by अनुमान. In the particular instance of fire and smoke, we can indeed derive the generalization of their invariable concomitance from a still wider generalization, namely the law of causality, by the direct syllogistic method, thus:—

Every effect is invariably associated with its cause ;

* See Sec. LXIV Note 3, p. 361 *infra.*

Smoke is the effect of fire ;

∴ Smoke is invariably associated with fire.

But this syllogism is quite different from the तर्क described above and is practically useless as it involves an argument in a circle. If smoke is invariably associated with fire, because it is the effect of fire, how do we know that it is such an effect ? This कार्यकारणभाव of smoke and fire can only be deduced from the observed invariable concomitance of the two, and hence the syllogism is defective as assuming a minor premise that is really derived from the conclusion. The व्याप्ति therefore must ultimately rest on the साहचर्य with its accessary व्यभिचारज्ञानविरह.

Inductive syllogism.

10. The तर्क by which व्याप्ति is obtained finds its analogy in Aristotle's system where he attempts to prove that induction is only a variety of syllogism. The central idea of the syllogism, as defined by Aristotle, is that of a conclusion following from given premises by *necessary* sequence,—an idea, by the way, which is already implied in the *Naiyâyika* doctrine that परामर्श is the करण of अनुमिति. To bring induction under syllogism it must be shown that the generalization follows as a *necessary* consequence from the premises, viz. the accumulation of particular instances. The proposition for instance that all bile-less animals are long-lived is deduced from particular cases of a horse, an ass, etc. Here Aristotle assumes that we have ascertained the attribute to belong to *all* the particulars, and that the inductive inference consists merely in passing from all of them to the class-term, *animal*. The passage from premises to conclusion is here necessary, for to grant the premise and yet to deny the conclusion involves a contradiction, *i. e.* the तर्क of *Nyâya*. The fallacy of this reasoning evidently lies in the deduction *per saltum* from a few particulars to the whole class. Mr. Grote's criticism on it is so just and so pertinent to our subject that the passage is worth quoting :—

" We can never " says Grote " observe *all* the particulars of a class, which is indefinite as to number of particulars, and definite

only in respect of the attributes connected by the class term. We can only observe *some* of the particulars, a greater or smaller proportion. Now it is in the transition from these *to* totality of particulars that the real inductive inference consists : not in the transition *from* the totality to the class-term which denotes totality and connotes its determining common attribute In fact the distinction between the totality of particulars and the meaning of class-term is one not commonly attended to ; though it is worthy of note in an analysis of the intellectual process, and is therefore brought to view by Aristotle."*

The Nyâya expedient.

11. This is exactly what is implied in the objection stated in T. D. सकलवाह्निधूमयोरसंनिकर्षात्कथं व्याप्तिग्रहः. The objection shows that the *Naiyâyikas* clearly saw the error into which Aristotle fell, and they tried to escape from it in a way peculiar to themselves. The difficulty is two-fold. In the first place, there is the obvious impossibility of our observing *all* the particulars denoted by the class-term (*e. g.* धूम); and secondly, even granting that we have ascertained *all* the cases, how do we arrive at the general notion of व्याप्ति, comprising those cases but certainly distinct from them ? धूमवाह्निसाहचर्य may be seen to exist in this case, and in that, and in a third, and so on ; but how do we get the superadded knowledge that it exists everywhere ? The notion of *everywhere* is distinct from and additional to the totality of particular cognitions. The expedient by which this two-fold difficulty is avoided by the *Naiyâyikas* is very characteristic, and at once distinguishes them from Aristotle, who regards induction as a mode of syllogism, and also from modern logicians like Mill, who regard it as an independent method of reasoning. J. S. Mill defines Induction as "that operation of the mind by which we infer that what we know to be true in a particular case or cases will be true in all cases which resemble the former in certain assignable respects."† Like Deduction Induction too is a process of

inference, proceeding from the known to the unknown, the unknown in its case being the general notion which is derived from the known particulars. *Naiyâyikas* however will not accept this, because they regard Induction not as an inference but as a kind of *extraordinary perception* (प्रत्यासत्ति). T. D. says that although we can never actually observe *all* the cases in which fire is associated with smoke, the invariable concomitance obtaining between the class fire and the class smoke is known by the अलौकिकप्रत्यक्ष called सामान्यलक्षणा प्रत्यासत्ति. This kind of *extraordinary perception* has already been explained as the process by which after perceiving an individual thing such as a घट, we at once cognize its जाति घटत्व, by the law of association. When two things are closely associated together, the perception of one necessarily leads to the immediate apprehension of the other. This is not an inference, for there is neither परामर्श, nor any हेतु. It is not also ordinary perception, because there is no इन्द्रियसंनिकर्ष with smoke in all the cases. The process is therefore something intermediate between perception proper and inference proper, *quasi*-perception, or a *quasi*-inference. प्रत्यासत्ति is thus a kind of *immediate* inference, and is therefore more akin to perception than to अनुमान which concerns with *mediate* truths only. But how is this explanation to be reconciled with the preceding statement of T. D. that व्याप्ति is proved by तर्क or *reductio ad absurdum* mode of reasoning ? The answer is that it is not व्याप्ति that is known by तर्क or any other syllogistic mode of reasoning, as Aristotle seems to say, but it is the व्यभिचारविरह that is so known. व्याप्ति is directly produced by साहचर्यज्ञान which is the result of actual perception, while the तर्क which proves व्यभिचारज्ञानविरह is accessory to it only so far as it dispels all doubts, and makes the knowledge of साहचर्य a certainty. It is not therefore correct to say that *Naiyâyikas* did not know Inductive reasoning. They were quite aware of it and have even described it pretty accurately ; but they included it under प्रत्यक्ष. This is quite clear from *Keśava Miśra's* statement, तथा च सत्युपाध्यभावजनितसंस्कारसहकृतेन भूयोदर्शनजनित-

संस्कारसहकृतेन साहचर्यग्राहिणा प्रत्यक्षेणैव धूमाग्न्योर्व्याप्तिरवधार्यते । * अनुमिति is essentially a *mediate* judgment, and cannot therefore include a generalization which is known *immediately*. Again this generalization has no use of its own beyond serving as a basis for a further deduction. Whether they were wrong or right in thus excluding Induction from inference proper is a different question, and need not occupy us here.

Corresponding varieties in Indian and Western logic.

12. Other varieties of अनुमान mentioned in a preceding note may also find their equivalents in European logic. पूर्ववत् is deduction proper; while सामान्यतोदृष्ट is either a deduction, or induction in the wider sense of the term used by Mill, namely, inference from several particulars, not to a generality, but to a distinct particular. शेषवत् is the process of elimination, which closely resembles Plato's method of *Logical Division*. Aristotle regarded *Logical Division* as only a fragment of the syllogistic process; and similarly *Naiyâyikas* class शेषवत् under व्यतिरेकि अनुमान. † The three-fold division of अनुमान into अन्वयि, व्यतिरेकि and उभयि chiefly concerns the हेतु, and is sufficiently accounted for by the obversion and conversion of propositions. ‡

SECT. XLVI. पञ्चावयवाः

The five members are:—1 Proposition, 2 Reason, 3 Examples, 4 Application and 5 Conclusion. Mountain is fiery,—this is Proposition. Because it has smoke,—this is Reason. Whatever smokes etc,—this is Example. This is like it,—this is Application. Hence it is so,—this is Conclusion.

The five-membered syllogism

1. Having distinguished the परार्थानुमान from the स्वार्थ in the preceding section, the author now goes on to enumerate its five component parts. परार्थानुमान is technically called a न्याय, which is defined as क्रमिकप्रतिज्ञादिसमुदायः 'collection of the five propositions, प्रतिज्ञा etc. in a regular order.' *Gangeśa* defines न्याय more accurately as अनुमितिचरमकारणलिङ्गपरामर्शप्रयोजकशाब्दज्ञानजनकवाक्यम्, 'a proposition or a series of propositions producing the

* T. B. Bom. ed. P. 35.

† *Viśvanâtha: Gotama-Sûtra-Vritti*, I, 5

‡ See Note 16 under Sect. 44, p. 251, *Supra*.

verbal knowledge which gives rise to the परामर्श (*i. e.* in the hearer's mind) which is the last and immediate cause of अनुमिति.' In other words न्याय is a series of propositions that produce in another's mind the same kind of पक्षधर्मताज्ञान as has already been produced in the speaker's mind by his own mental reasoning. This fairly corresponds to Aristotle's notion of *syllogism* which is defined "a *speech* (or enunciation) in which certain things (the premises) being supposed, something different from what is supposed (*i.e.* the conclusion,) follows *of necessity*; and this solely in virtue of the suppositions themselves."* Unlike Aristotle however who gives three premises to the syllogism, the *Naiyâyikas* make it consist of five parts or limbs (अवयव), namely, *Assertion* (प्रतिज्ञा), *Reason* (हेतु) *Proposition* or *Example* (उदाहरण), *Application* (उपनय) and *Deduction* or *Conclusion* (निगमन). *Assertion* is defined as साध्यनिर्देशः ' the declaration of the साध्य as existing on the पक्ष'† or साध्यवत्तया पक्षवचनं, as T. D. puts it, 'speaking of पक्ष as possessing the साध्य.' Its purpose is to prepare the hearer beforehand as to what thing he should except to be proved by the syllogism, and it is therefore analogous to the *Problema* or *Questio* of the older European logicians. After the *Assertion* is made, one is naturally tempted to ask, whence, or why, or what evidence; and their answer to this query is the *Reason* which declares the mark or evidence that proves the existence of साध्य on पक्ष, and which is generally but not necessarily in the ablative case. Every word in the ablative is of course not a हेतु, as for instance, in the sentence अयं न दण्डात् । दण्डसंयोगजन्यद्रव्यत्वात् । दण्डात् is not a हेतु, although the word is in the ablative, because it does not declare the लिङ्ग. Here it may be remarked that the two words हेतु and लिङ्ग, though often used indiscriminately, slightly differ in meaning, लिङ्ग being the *mark* such as धूम, while हेतु is the लिङ्गप्रतिपादकवचन 'the sentence which declares that *mark*. The लिङ्ग as expressed in the हेतुवाक्य may be similar or

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* Aristotle: *Prior. Analyt.* Bk. i, Ch, 1, Sec. 7.

† G. S. I, 1, 33.

dissimilar to the साध्य, and thus the हेतु is of two kinds अन्वयि and व्यतिरेकि. When the *Reason* is given, the question would naturally arise why should the लिङ्ग prove that साध्य, or in other words what connection can there be between the fire and the smoke which makes us infer the one from the other ? To satisfy this query, the third premise दृष्टान्त or उदाहरण is employed to show the invariable concomitance of fire and smoke. Well, says the objector, let there be this invariable concomitance, but how is it relevant to the point before us ? To show this the व्याप्ति is incorporated with प्रतिज्ञा and हेतु, and the combination results in परामर्श which is expressed by the fourth sentence, *Application* or उपनय. The last, viz. *Conclusion*, brings together all these several elements into one proposition, and thus enables the hearer to comprehend the result at once. निगमन is defined by *Gotama* as the repetition of the प्रतिज्ञा as proved by the हेतु,* and *Vatsyâyana* explains it as निगम्यन्ते समर्थ्यन्ते सम्बध्यन्तेऽनेन प्रतिज्ञाहेतूदाहरणोपनया एकत्रेति निगमनम्. Its purpose, says T. D., is to exclude the possibility of any uncertainty or contradiction as to the existence of साध्य. The last three will be obviously either positive or negative according as the हेतु is अन्वयि or व्यतिरेकि.

The five premises

2. The forms of these five premises are also settled by convention. First there is the *Assertion* पर्वतो वह्निमान, in which the पक्ष (पर्वत) is the subject, and the साध्य is spoken of as its property. The *Reason* is generally in the ablative, but sometimes in the instrumental also. The व्याप्ति or *Proposition* has two forms; in one the साध्य and साधन whose concomitance is spoken of are used as properties of their common substratum, which is the subject in both the principal and the relative sentences, as in यो यो धूमवान् स वह्निमान्; while in the other form the substratum is put in the locative and the साध्य and साधन are expressed in the nominative,

* G. S. I. 1, 34-5.

as in यत्र यत्र धूमस्तत्र तत्र वह्निः. Of these the first is preferred as agreeing with the form of other premises, although the second expresses the व्याप्ति better and more naturally. The उपनयवाक्य has of course the पक्ष for its subject with the साध्यव्याप्यहेतु as its qualifying attribute, and it is indicated by the general formula तथा चायम्, अयम् denoting the पक्ष and तथा its qualification. The निगमन does not differ in form from the प्रतिज्ञा, but that it is different in reality is plainly indicated by its formula तस्मात् तथा, in which तथा denotes the sense conveyed by the प्रतिज्ञा, and तस्मात् sums up the result of the intermediate premises.

The Indian and the Aristotelian syllogisms compared

3. The five-membered न्याय as described above considerably differs from the tripartite syllogism of Aristotle, but a little consideration will show that the difference lies more in the form than in the essence in which the two have been shown to agree remarkably. The most obvious distinction between the two syllogisms is of course the different number of premises, being five in one and three in the other; and as both give equally valid conclusions, one is naturally tempted to conclude that either two premises in the one must be superfluous or the other must be defective to that extent. As a matter of fact, neither alternative is true. Human mind being alike everywhere, it is no wonder that philosophers in the East and the West independently followed the same laws of thought and adopted the same process of reasoning. But though there is no difference in our thinking process, there is much in our respective modes of conveying our thoughts to others. Hence is it that while the essential requisites of a valid inference are the same according to both *Gotama* and Aristotle, their manner of clothing those essentials in the form of premises varies considerably. Aristotle's premises are nothing more than the absolutely necessary constituent parts of an inference connected together by the slender tie of mere juxtaposition. The *limbs* of the *Naiyâyika* अनुमान on the other hand constitute a fully reasoned out

argument whose parts follow one after another in their natural sequence. Aristotle's premises are as it were a simple enumeration of the several steps in a deductive reasoning; the Sanskrit न्याय is a regularly constructed debate in miniature. Aristotle's syllogism only furnishes the skeleton, and the reader or hearer fills up the interstices; in its Sanskrit counter-part, the speaker himself goes through all the steps and the hearer has only to follow him. Thus one is rather analytical or demonstrative, the other is expository and rhetorical. The न्याय is more useful in discovering the conclusion; Aristotle's syllogism is better fitted to test its validity. Each has a different purpose and is best suited to achieve it. In this respect, the Sanskrit न्याय is more akin to the rhetorical mode of argumentation which was so popular with the Sophists before Aristotle and which attained its height in the Socratic method of cross-examination and Plăto's Dialectics.

The Nyâya.

4. A sanskrit न्याय is in fact nothing but a model dialogue in which the questions of one party are omitted and are to be inferred from the answers given. The five-membered syllogism is designed to convince a doubting adversary who asks questions and raises objections at each step, which questions and objections are answered by the successive premises. It is in fact an axiom with the *Naiyâyikas* that there can be no argumentation without an आकांक्षा, a sort of doubt accompanied by a desire to have it solved. But how can there be an आकांक्षा in the beginning when the debate is not yet commenced and neither of the disputants has spoken. This आकांक्षा is therefore artificially created by the dogmatic *assertion* (प्रतिज्ञा) of the proposition that is to be ultimately proved. *Gaṅgeśa* in his *Tattva-Chintâmani* expressly says "कथायामाकांक्षाक्रमेणाभिधानमिति प्रथमं साध्याभिधानं विना 'कुतः' इत्याकारकहेत्वाद्याकांक्षाभावात् प्राथम्येन प्रतिज्ञाप्रयोगः" This is the reason why the Sanskrit न्याय begins with प्रतिज्ञा and not, like Aristotle's syllogism, with the व्याप्ति-वाक्य or *major premise*, for the व्याप्ति, being an undisputed generalization, will not give rise to any आकांक्षा

or doubt, and so the agrument would never proceed. The Sanskrit syllogism seems to be purposely framed so as to keep this आकांक्षा alive until the conclusion is reached. The five members of the Sanskrit न्याय thus form a series of doubts and answers in a logical sequence, and the परार्थानुमान formed by them is a demonstrative deduction mainly intended for the enlightenment of another.

The five-membered syllogism criticized.

5. The five-membered argument has been subjected to much undeserved criticism, both for and against it. Those seeking brevity and compactness censure it as being a rude and clumsy form of syllogism, while others prefer it to the Aristotelian syllogism as exhibiting "a more natural mode of reasoning than is compatible with the compressed limits of the syllogism."* Both the praise and the blame however are only partially true. The five-membered *Nyâya* reflects no doubt more accurately the actual method followed in a debate, but it is for that very reason unsuited to be a test of the validity of the reasoning. The five-membered form is much more loose and affords greater facilities for fallacies to creep in undetected than the compact Aristotelian syllogism. It does not provide fully for the correct indication of the quantification, qualification and modality of each proposition. The distinction between Universals and Particulars is not observed, while the distinction between Affirmative and Negative is only partially recognized in the form of अन्वय and व्यतिरेक. Consequently there are no figures and no moods. Aristotle starts from the generalization and inquires what conclusion can be legitimately deduced from it. He is therefore obliged first to determine the exact scope of the proposition that stands as the *major premise* and so the most common fallacies, such as the *Petitio Principii*, which generally underlie the *major premise*, are at once excluded. Not so with the *Naiyâyika* who starting with the conclusion as a प्रतिज्ञा and having to find out a व्याप्ति most suited to prove it, does not pay much heed to the wording of the उदाहरण or of any other premise so long as his meaning is

* Sir G. Haughtan's *Prodromus* p. 215, quoted in Ballantyne's *Lectures on Nyâya Philosophy.*

intelligibly conveyed. It would in fact have been impossible to raise upon the five-membered *Nyâya* the splendid superstructure of Deductive Logic that Aristotle has constructed on the basis of his syllogism. On the other hand as a controversial weapon, the five-membered syllogism is far superior to that of Aristotle, since it forces the debate to run in a particular channel, and thus prevents the adversary from straying away from the point.

6. It is also very well adapted for the exposition of simple truths to the uninstructed mind, as it requires no assumption and does not tax the brain at all. The best illustration of this is to be found in Euclid's geometrical theorems. Euclid's method closely resembles the five-membered syllogism. First, there is the *hypothesis* or *enunciation* (प्रतिज्ञा) that all the angles of a triangle are equal to two right angles. The three angles together constitute the पक्ष, and the equality to two right angles is the साध्य. The *particular enunciation* and the *determination* are only a special application of the facts declared in the hypothesis. Strictly speaking the *particular enunciation* is the real प्रतिज्ञा while the *hypothesis* is a further generalization derived from it. Then comes the *demonstration* which first gives reasons (हेतु) and then quotes authorities (उदाहरण). The *demonstration* ends with a summing up corresponding to परामर्श and introduced by 'Where'; Lastly comes the *conclusion* (निगमन) beginning with 'Therefore,' and identical with the *enunciation*. The whole is then wound up with a flourish of trumpets in the shape of a *Quod erat demonstrandum* (Q. E. D.) Euclid employed the dialectical syllogism prevailing before Aristotle, as most suited to his purpose; and a similar one was adopted by the Indian Pandits in instructing their pupils.

Essential components of the syllogism.

7. As already noted, the five-membered syllogism, notwithstanding the difference of form, is essentially the same as that adopted by Aristotle and the modern European logicians. In a legitimate syllogism, says J. S. Mill,* it is essential that there should be three and

* Mill: *System of Logic*, People's Ed. p. 108.

no more than three propositions, namely, the conclusion and the two (*major* and *minor*) premises. It is also essential that there should be three and no more than three terms, namely the *major* and the *minor* terms which respectively form the predicate and subject of the conclusion, and a third one named the *middle term*, which acts as a link between the two. Similarly there are three and no more than three terms in a Sanskrit *Nyâya*, namely, the साध्य the *major* term and predicate of the conclusion, पक्ष the *minor* term and subject of the conclusion, and लिङ्ग the *middle* term, which being cognized as a पक्षधर्म acts as a link to connect the साध्य with the पक्ष. But what about the three and no more than three propositions that form the syllogism? A little examination will show that they too have their counterparts in the five members of the *Nyâya*. The निगमन and प्रतिज्ञा are the same, and so one of them the प्रतिज्ञा for instance may be safely dispensed with. It has also been pointed out* that the mental operation corresponding to परामर्श and denoted by उपनय is a repetition or rather a particular application of the हेतु, and is taken as understood between the minor premise and the conclusion in Aristotle's syllogism. Either उपनय or हेतु may therefore be omitted as superfluous. There remain thus three propositions only, the हेतु or उपनय which is the *minor* premise, the उदाहरण which is the *major* one, and the निगमन or conclusion.

Mutual conversion of the two syllogisms.

8. The component parts of the two syllogisms being the same they can be easily converted into each other. Simply by transposing the two remaining premises in the five-membered *Nyâya*, we get a perfect Aristolelian syllogism in *Barbara* of the First Figure. Take for example the hackneyed instance of a smoking mountain:—

(प्रतिज्ञा)—पर्वतो वह्निमान् ।
(हेतु)—धूमात् ।
(उदाहरण)—यो यो धूमवान् स स वह्निमान् यथा महानसः ।

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* See Note 5 pp. 236-7, *Supra.*

(उपनय)—वह्निव्याप्यधूमवानयं पर्वतः ।

(निगमन)—तस्माद्वह्निमान् पर्वतः ।

Omitting the प्रतिज्ञा, the उपनय and the illustration यथा महानसः appended to the उदाहरण, and likewise transposing the two premises हेतु and उदाहरण, we get:—

यो यो धूमवान् स स वह्निमान् ।

धूमात् =पर्वतस्य धूमवत्त्वात्

(By dropping the useless ablative)

=पर्वतस्य धूमः or पर्वतो धूमवान् ।

पर्वतो वह्निमान् ।

When translated the premises will run:—

Whatever smokes is fiery;

This mountain is a thing that smokes;

∴This mountain is fiery.

This is evidently a Universal Affirmative in *Barbara*,

All B is A,

All C is B,

∴All C is A.

Similarly an Aristotelian syllogism in *Barbara* can be converted into the Sanskrit *Nyâya* by the reverse process, namely transposition of premises and addition of प्रतिज्ञा and उपनय. Thus:—

All men are mortal,

Socrates is a man,

∴Socrates is mortal.

Which is the same as,

Whoever has humanity has mortality,

Socrates has humanity,

∴Socrates has mortality.

Transpose the premises and translate:—

देवदत्तो मनुष्यत्ववान् (मनुष्यः)

यो यो मनुष्यत्ववान् (मनुष्यः) स स मर्त्यत्ववान् (मर्त्यः)

देवदत्तो मर्त्यत्ववान् (मर्त्यः)

Add प्रतिज्ञा and उपनय and put the हेतु in the ablative form, and the syllogism becomes a full-fledged *Nyâya*—

देवदत्तो मर्त्यत्वविशिष्टः (मर्त्यः) ।
मनुष्यत्वविशिष्टत्वात (मनुष्यत्वात्) ।
यो यो मनुष्यत्वविशिष्टः (मनुष्यः) स मर्त्यत्वविशिष्टः (मर्त्यः) यथा यज्ञदत्तः ।
तथा चायम् ।
तस्मात्तथा ।

We might arrive at the same result by taking only the first three members, प्रतिज्ञा हेतु and उदाहरण, as the *Mîmâṁsakas* do, and by ignoring the rest; only that in this case we shall have to invert the order of all the three propositions when converting them into an English syllogism. The easiest mode of conversion however is to omit the first two propositions प्रतिज्ञा and हेतु altogether, and then take the remaining three in their order, so that the उदाहरण would be the *major* premise, उपनय the *minor*, and निगमन the conclusion of the English syllogism. In this way we shall avoid the necessity of transposing the premises, and also remove the awkwardness of changing the ablative हेतु into nominative.

9. *Reduction.* As to the Second, Third and Fourth Figures, as well as the remaining three Moods of the First Figure, conversion can be easily effected by first reducing them to *Barbara* and then converting them in the above manner. The last three figures being always reducible to the first may be left out of consideration. Of the three remaining Moods of the First Figure the two particular Moods, *Darii* and *Ferioque* are not possible in the Sanskrit *Nyâya*, as it does not recognize a particular conclusion. The reason why particular conclusions were disregarded by the *Naiyâyikas* appears to be their uselessness. What the *Naiyâyikas* wished to gain from an inference as from all other proofs was प्रमा, right and definite knowledge, for it is this प्रमात्मकज्ञान alone that has any scientific value. A particular conclusion is obviously a vague and imperfect judgment. The very form of the five-membered

syllogism points to the impossibility of having a particular conclusion. A conclusion in I or O can be had only when its subject, that is, the *minor term* or पक्ष denotes only *some* individuals of a class; but in the sanskrit syllogism, the पक्ष must be a definite thing, that is, either an individual object like this or that mountain (as is generally the case), or at best the whole class denoted by a class-name and looked upon as one object. Otherwise there can be no पक्षधर्म and there can be no पक्षधर्मताज्ञान having a particular object like the mountain for its विषय. In cases where the साध्य is inferred on a number of things which do not however form the whole class, there is really no particular conclusion, but there are as many inferences and conclusions as there are things. The minor term being thus always universal, the conclusion must be universal too. The case of *Celarent* (E A E) is more complex but can be explained in the same way. Although the *Naiyâyika* does not deny the possibility of a *negative* judgment (व्यतिरेकी अनुमिति), it seems that his conclusion (निगमन) is always affirmative in form, the change from negation to affirmation being made by the simple expedient of prefixing the negative particle (अ or अन्), or adding the word अभाव to the predicate. Thus a *Naiyâyika* will say, not शब्दो नित्यो नास्ति, but शब्दोऽनित्योस्ति or शब्दे नित्यत्वाभावोऽस्ति. His प्रतिज्ञा and निगमन, which are identical, must always *assert something* of another thing, even though that *some* thing is an अभाव; the निगमन therefore cannot be purely negative although the व्याप्ति or लिङ्ग be व्यतिरेकि. Besides purely negative knowledge cannot strictly speaking be a प्रमा, because there can be no प्रकार in निषेध and the definition तद्वति तत्प्रकारकत्वम् will be inapplicable. Hence *Celarent* too is not possible in Sanskrit. Whenever therefore we have a negative judgment, we have always to turn it into an affirmative one by the addition of अभाव or its synonym भेद, as is generally done in a केवलव्यतिरेकि अनुमान *e. g.* पृथिवीतरभेदवती, which simply translated means Earth is *not anything* else. It is obvious therefore that there can be only one form of syllogism in Sanskrit, namely, the Universal

Affirmative (*Barbara*). Even Aristotle has shown that all kinds of syllogism can be ultimately reduced to the first two Moods of the First Figure,* and the distinction between these two is easily removed by the above expedient. This explains why the Sanskrit *Nyâya*, though so much limited in its scope, never fails to give a valid conclusion under any circumstances.

Other syllogisms accepted by Indian systematists.

10. The five-membered syllogism though generally popular is not universally accepted even in India. An ancient school of *Naiyâyikas* was not satisfied with the five limbs, but added five more, namely, Curiosity (जिज्ञासा) Doubt (संशय), Power of the proofs to produce knowledge (शक्यप्राप्ति), Aim (प्रयोजन) and Removal of objections (संशयव्युदास) But they are, says *Vâtsyâyana*, only aids to the inference, not members of the syllogism, because the definition of an अवयव (न्यायघटकत्व) does not apply to them.† The five-membered syllogism thus became the type for all *Naiyâykas* and was accepted even by the *Vaiśeshikas*. Other systematists however carried the pruning process still further. The *Mîmâṁsakas* recognized three members only, प्रतिज्ञा, हेतु and उदाहरण, while another school recognized हेतु, उदाहरण and उपनय. The *Vedântins* also insist on having three members only, but they are not particular as to whether the first three or the last three should be taken. Thus *Vedânta-Paribhâshâ* remarks:—अवयवाश्च त्रय एव प्रतिज्ञाहेतूदाहरणरूपा उदाहरणोपनयनिगमनरूपा वा न तु पञ्च। अवयवत्रयेणैव व्याप्तिपक्षधर्मयोरुपदर्शनसम्भवेनाधिकावयवद्वयस्य व्यर्थत्वात्‡ The *Bauddhas* recognize only two, उदाहरण and उपनय. The author of *Nyâya-Bindu* who was a Buddhist likewise mentions two only, प्रतिज्ञा and हेतु, making the दृष्टान्त or व्याप्ति a part of the हेतु. Thus it will be seen that the weight of opinion outside the *Nyâya* and *Vaiśeshika* schools inclines towards the acceptance of a

* Grote's *Aristotle* Vol I. p. 223

† *Vât.* on G. S. I, I, 32.

‡ *Vedânta-Paribhâshâ.* Calc. ed. p. 14.

three-membered syllogism, which is practically identical with that of Aristotle.

Other names.

11. Although there is so much difference of opinion as to the number of the members of a *Nyâya*, there is a general agreement about the form and the import of the several members; only that the *Vaiśeshikas* have a second set of significant names for the five members, viz. प्रतिज्ञा (Promise), अपदेश (sign), निदर्शन (Illustration), अनुसंधान (Scrutiny) and प्रत्याम्नाय (Repetition).‡ Which of these two sets of the names is the older one is not known at present.

Why the third member is called Udâharaṇa.

12. The case of one of the five members, viz. उदाहरण or व्याप्ति, is somewhat peculiar, and requires further examination, as it is likely to throw much light on the history of the five-membered syllogism. It must have been noticed that while the names of other members are significant, there is apparently no reason why the proposition stating the व्याप्ति should be called उदाहरण or दृष्टान्त, except the accident of its containing, as a sort of an appendage, the illustration यथा महानसः. It is the first part of the उदाहरण containing व्याप्ति that is really essential to the syllogism, while the illustration is not only unnecessary, but is often omitted. It is certainly anomalous that the most important premise in the syllogism, on which in fact the inference chiefly rests, should be reduced to the position of a mere दृष्टान्त, and thus be deprived of its essential character, viz. universality. How are we to account for this anomaly ? Nay the presence of the illustration in the उदाहरण has been actually made the ground of censure against the Indian syllogism by some superficial critics; while even those who have defended it offer rather an apology than a well-grounded explanation of its existence. Ritter† for instance says that two of the five members of *Kaṇâda's* argument "are manifestly super-

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* V. S. Up. Calc. ed. p. 397.

† Ritter. *History of philosophy* Vol. IV. p. 365.

fluous, while by the introduction of an example in the third the universality of the conclusion is vitiated." The conclusion is vitiated because the addition of the example puts some sort of limitation on the general proposition, and thus takes away its universality. The most that Ballantyne could say to justify the example was that it is "a matter of rhetorical convenience, designed to bring to the recollection of the hearer examples, in regard to which all parties are unanimous, and which are such as should constrain him to admit the universality of the principle from which the conclusion follows."* But this explanation is not at all satisfactory. The universal proposition, if true and unanimously accepted, does not get any additional weight by a stray example, while if it is false or unfounded, the citation of a single example only serves to mislead the hearer, and is therefore quite out of place in a valid syllogism. The example, say the critics, is either superfluous or mischievous, and ought therefore to be discarded altogether. It was so discarded by the *Vaiśeshikas* who limited the proposition to the mere statement of the व्याप्ति, but the general practice of the *Naiyâyikas* has still retained it.

13. Max Müller starts another theory to explain away the difficulty. "But if we inquire more carefully," says he, "we find that the instance in *Gotama's* syllogism has its own distinct office, not to strengthen or to limit the universal proposition, but to indicate, if I may say so, its modality. Every *Vyâpti* must of course admit at least one instance. These instances may be either positive only, or negative only, or both positive and negative."† This means that the instance is intended to show whether the व्याप्ति is अन्वयि or व्यतिरेकि. The theory is no doubt plausible, and seems to have been suggested by the two kinds of instances, सपक्षदृष्टान्त and विपक्षदृष्टान्त recognized by the *Naiyâyikas*; but it neither solves the real difficulty, nor is it absolutely correct. As a matter of fact the अन्वय and व्यतिरेक are indicated, so far as they can be so indicated, in the व्याप्ति

itself, and not the दृष्टान्त; while the latter takes its own character from the व्याप्ति. It is the व्याप्ति which makes a दृष्टान्त either अन्वयि or व्यतिरेकि, and not *vice versa.* Take for instance the proposition यत्र वह्निर्नास्ति तत्र धूमोऽपि नास्ति यथा महाह्रदे, that is say, यत्र वह्न्यभावस्तत्रधूमाभावः यथा महाह्रदे. This is a व्यतिरेकिव्याप्ति, if वह्नि is the साध्य and धूम the साधन, and महाह्रद will be a विपक्षदृष्टान्त. But suppose the साध्य to be धूमाभाव and the साधन to be वह्न्यभाव, that is, we infer not fire from smoke but absence of smoke from the absence of fire; then the same व्याप्ति will be an अन्वयव्याप्ति and the दृष्टान्त will be a सपक्षदृष्टान्त. So it is really the साध्य and साधन that first determine the modality of the व्याप्ति, and then of the दृष्टान्त. The दृष्टान्त will therefore be practically useless for determining the *modality* of the universal proposition, for when we know what sort of दृष्टान्त it is, the *modality* is already determined. Of course the दृष्टान्त may often assist us in understanding the scope of the व्याप्ति; but the question before us is not whether it may be occasionally useful where it is put, but whether it is absolutely necessary. Besides, the theory even supposing it to be correct does not explain the anomaly how the universal proposition came to be called a mere उदाहरण or दृष्टान्त. In one sense, however, Max Müller is right, probably without being aware of it. We shall presently see how.

An explanation suggested.

14. The real explanation, if a conjecture may be hazarded, is rather historical than logical. It is not that the instance was tacked to the universal proposition for the purpose of satisfying some logical necessity; but it appears more probable that the instance was the original part, and the generalization itself is a later addition. There seems to have been at first only the instance and nothing else in the third member when the five members received their designations, and that the portion stating the व्याप्ति was added afterwards when its necessity came to be perceived. We can clearly discover traces of the process by which this enlargement of the third member was brought about, if we examine the

various references to it in different works on *Nyâya*. Modern writers like *Annambhaṭṭa* define उदाहरण as व्याप्तिप्रतिपादकं वाक्यम्, but there is no trace of this व्याप्तिप्रतिपादकत्व in *Gotama's* definition, साध्यसाधर्म्यात् तद्धर्मभावी दृष्टान्त उदाहरणम्,* which means that 'the उदाहरण is an instance which possesses an essential property of the साध्य by similarity'. This definition obviously applies to the महानस alone which possesses the साध्यधर्म वह्निमत्त्व, and not to the व्याप्तिवाक्य. At the time of *Gotama's Sûtras*, therefore, the five-membered syllogism seems to have run thus: पर्वतो वह्निमान् । धूमवत्त्वात् । यथा महानसः । तथा चायम् । तस्मात्तथा । This primitive form of the syllogism at once explains two things. First it accounts for the third member being called उदाहरण or दृष्टान्त, because there is obviously nothing but the instance in it. Secondly, it explains why the उपनय which follows उदाहरण began with तथा, which seems to have been first used as a co-relative of यथा in the उदाहरण. The उदाहरण and the उपनय appear in fact to have formed one complex sentence, यथा महानसस्तथाऽयं पर्वतः (As was the kitchen so is this mountain smoking), of which the उदाहरण beginning with यथा formed the relative half, and the उपनय beginning with तथा was the principal part. On some such supposition alone can we understand why *Gotama* defines उपनय as उदाहरणापेक्षस्तथेत्युपसंहारः†. उदाहरणापेक्ष, says *Vâtsyâyana*, means उदाहरणवश, 'depending on the उदाहरण,' depending of course in the sense that the co-relative sentence तथाऽयं पर्वतः can be properly understood only from its relative antecedent यथा महानसः. But this does not convey the full idea of उपनय; so it is further called an उपसंहार, 'a summing up' as it were, *i. e.* an application of the sense conveyed in the उदाहरण to the present case of the mountain, which application is of course implied by the word तथा. *Gotama's* definition of उपनय is however quite unintelligible if applied to the syllogism as it stands at present, for the उदाहरण which begins with व्याप्ति cannot be the relative antecedent of the उपनय, and so there is no word of which तथा might be a co-relative.

15. The above hypothesis as to the original form of the syllogism is not conjectural only ; for the skeleton syllogism mentioned above is actually found in all the ancient works on *Nyâya*, which rarely mention the व्याप्ति. *Dharmakîrti*, for instance, the author of *Nyâya-Bindu*, gives, as an illustration of a faulty दृष्टान्त, the syllogism, अनित्यः शब्दः । कृतकत्वात् । आकाशवत्* ; while in another place of the same work he quotes the stock instance thus, यत्र धूमस्तत्रवह्निः । यथामहानसादौ । अस्तिचेह धूम इति । (p. 109). This was therefore the original five-membered syllogism, but it was soon found to be imperfect. There was nothing in it to determine the साध्यानियतत्व of हेतु, that is, to show the *invarible concomitance* of the साध्य with the हेतु. At first the दृष्टान्त itself was made to convey this sense, but it was obviously inadequate to serve the purpose, and a door was opened to many fallacies arising from imperfect generalizations. To guard against this danger the universal proposition यत्र यत्र धूमः etc. was inserted. If a guess can be hazarded, the व्याप्तिवाक्य was possibly at first inserted in the हेतुवाक्य as a विशेषण of साध्यव्याप्य हेतु, as is shown in the above quotation from *Nyâya-Bindu*, and later it was transposed to उदाहरण. Being thus originally a subordinate adjunct of हेतु, it became later on an independent and the chief premise. Before the व्याप्तिवाक्य had come into the syllogism, the अन्वय and व्यतिरेक of the हेतु were determined by the दृष्टान्त, according as it had similarity (साधर्म्य) or dissimilarity (वैधर्म्य) with the साध्य; but it was rendered practically useless after the व्याप्तिवाक्य had settled down as a necessary part of the syllogism. Max Müller's theory about the instance being indicative of the *modality*, may therefore have been true when the दृष्टान्त was the sole member of the उदाहरणवाक्य. The commentator of *Nyâya-Bindu* declares in fact the same thing when he says, तस्माद्दृष्टान्तव्यतिरेकेण हेतोरन्वयो व्यतिरेको वा न शक्यो दर्शयितुम्.† 'The अन्वय or व्यतिरेक of the हेतु cannot be indicated except by the दृष्टान्त.' After the व्याप्ति had become the chief and necessary part of the उदाहरण, this function of the दृष्टान्त was naturally shifted to it, and the दृष्टान्त gradually sunk to the level of an useless appendage. The conservative *Naiyâ-*

* *Nyâya-Bindu-Tîkâ*, Bibl. Ind. p. 118.

† *Ibid.* p. 90.

yikas have persisted in retaining it, but a modern writer *Laugâkshi Bhâskara* in his *Nyâya-Siddhânta-Mañjari-Prakâśa*, has the courage to declare दृष्टान्तप्रयोगस्तु सामयिको न नियतः, 'the employment of the instance is purely conventional and not necessary.' In this way the दृष्टान्त, which was at first the gist of the उदाहरण, came to be positively ignored.

15. A singular analogy to the *Naiyâyika* उदाहरण is to be found in the Argument from Example, noticed by Aristotle, and apparently very common before him in Greece. Aristotle gives as an illustration:—

The War of Athens against Thebes (पक्ष) was mischievous (साध्य);

Because it was a war against neighbours (हेतु);

Just as the war of Thebes against Phokis was (दृष्टान्त).*

Both the ancient Sanskrit syllogism and the Greek Argument by Example appear to be cases of an inference from particulars to particulars which, according to J. S. Mill, was the original and true type of an inference. †

SECT. XLVII. परामर्शः

Consideration of the sign is alone the cause of both One's Own and Another's judgment. Hence the Consideration is the Inference.

The proximate cause of Anumiti.

1. परामर्श has already been explained,‡ and it has also been shown why it is called लिङ्गपरामर्श or तृतीयलिङ्गपरामर्श. § *Annambhaṭṭa* purposely uses the word लिङ्गपरामर्श, instead of simple परामर्श, in order to emphasize his view that the real करण of अनुमिति is the लिङ्गपरामर्श and not लिङ्ग merely, as some say, and that the name अनुमान is properly applicable to the लिङ्गपरामर्श alone. In T. D. he briefly notices the three views that have prevailed about the real proximate cause of अनुमिति. The अनुमितिकरण, according to these three schools of opinion,

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* Grote *Aristotle* Vol. I. p. 274.

† Mill : *System of Logic*, People's Ed. p. 126.

‡ Vide Note 3 on Sec. 44, p. 234, *Supra.*

§ See Note 3 on Sec. 45 p. 255, *Supra.*

is either लिङ्गज्ञान, व्याप्तिज्ञान or परामर्श. The first is the view of the *Vaiśeshikas*, who accordingly name अनुमिति as लैङ्गिकज्ञान. *Śaṅkara Miśra* the author of *Upaskâra* sums up this view in the following couplet:—

अनुमेयेन सम्बद्धं प्रसिद्धं च तदन्विते ।
तदभावे तु नास्त्येव तल्लिङ्गमनुमापकम् ॥*

'लिङ्ग is the अनुमितिकरण, because it is connected with साध्य (अनुमेय) on the पक्ष, is known to exist wherever साध्य exists, and is never found where साध्य is absent.' *Śankara Miśra* argues that परामर्श, having no व्यापार after it, cannot be the करण which is always व्यापारवत्, while if लिङ्ग be the करण, परामर्श itself becomes its व्यापार. This view is summarily rejected by *Annambhaṭṭa* on the ground that it leads to the absurdity that even a past or a future लिङ्ग, that is, smoke which was once observed but does not now exist on the mountain or smoke which is not yet seen on the mountain, would produce the अनुमिति of the present existence of fire. If smoke alone is the करण of अनुमिति there is no reason why the smoke of yesterday or the smoke of to-morrow should not produce an inference of a fire existing on the mountain to-day. Hence the necessity of the condition that लिङ्ग, in order to be effective for अनुमान, must be first observed as a पक्षधर्म, that is, as a property of the mountain actually existing at the time of the inference. In other words it is the पक्षधर्मताज्ञान, otherwise called परामर्श, and not लिङ्गज्ञान merely, that is the real करण of अनुमिति.

2. But one might ask why create a new करण of अनुमिति in the form of the composite परामर्श which is a mixture of व्याप्तिज्ञान and पक्षधर्मताज्ञान, when you can as well look upon the last two themselves as severally the करणs of अनुमिति. To this *Annambhaṭṭa* replies that it is simpler to hold the complex परामर्श as the one करण of अनुमिति than to recognize two separate करणs in the shape of व्याप्तिस्मृति and पक्षधर्मताज्ञान. Besides we might have even agreed to this latter alternative if the परामर्श could have been altogether dispensed with; but that is not possible, because परामर्श is necessary to account for the

* V. S. Up. Calc. ed. p. 392.

cognition which is conveyed by the उपनय in a परार्थानुमान, and which thereupon produces the अनुमिति in the hearer's mind. If then परामर्श must be recognized as the करण of a परार्थानुमिति, why have a separate करण for the स्वार्थानुमिति, when the same can do for both? This reasoning is faultless, except that according to those who define करण as व्यापारवद्-साधारणं कारणं, परामर्श cannot be the करण as it has no व्यापार coming after it. Hence the advocates of this definition of करण, namely, the ancient *Naiyâyikas*, propose व्याप्तिज्ञान to be the करण and परामर्श to be its व्यापार, while the moderns who deny the necessity of व्यापारवत्त्व and define करण as फला-योगव्यवच्छिन्नं कारणं regard परामर्श itself as the करण. *Annambhaṭṭa* seems really to be vascilating between these two views, although in the text he has made the emphatic declaration लिङ्गपरामर्श एव करणम्, and his vascilation is due to his non-preference for either of the two definitions of करण. At least there is a glaring inconsistency between this passage and the concluding remarks of Sect. 43 where he declares इन्द्रिय to be the करण of प्रत्यक्ष.* Had it not been for those remarks, it could have been said with much plausibility that, notwithstanding his obvious indecision as to the real definition of a करण, *Annambhaṭṭa* adopted the modern in preference to the ancient view. Probably he did so, and the statement about the करण of प्रत्यक्ष was made simply in deference to the popular convention which from time immemorial has regarded इन्द्रिय to be the करण of प्रत्यक्ष and has thereby made the very word करण synonymous with इन्द्रिय. The book being intended for beginners the author appears to have avoided all fruitless controversies as much as possible, and hence sometimes fell into inconsistencies.

3. The reading कारणम् in the first part of this section is obviously wrong, although it is found in all Mss. except two. It is probably an emendation of some later copyist, who having noticed the inconsistency of this passage with Sect. 41 thought of removing it by improving the text.

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*See p. 32; and Note 3 thereon p. 224, *Supra*.

SECT. XLVIII. लिङ्गम्

Mark or Sign is of three kinds : 1 positive and negative, 2 purely positive, and 3 purely negative. That which pervades both positively and negatively is positive–negative, as for instance, smokiness when fire is to be proved. " Where there is smoke, there is fire as in a kitchen " is positive concomitance. " Where there is no fire there is no smoke as in a lake" is negative concomitance. Purely positive is that where there is positive concomitance only, e. g. pot is nameable because it is knowable like cloth. Here there is no negative concomitance of nameability or knowability as all things are knowable and nameable. Purely negative is that which has a negative concomitance only, e. g. earth differs from other things because it has smell ; that which does not so differ has no smell, as water ; this is not like it ; and hence it is not so. Here there is no positive instance (of a thing) that has smell (and yet) differs from others, because the whole earth forms the subject.

The reason or 'mark.'

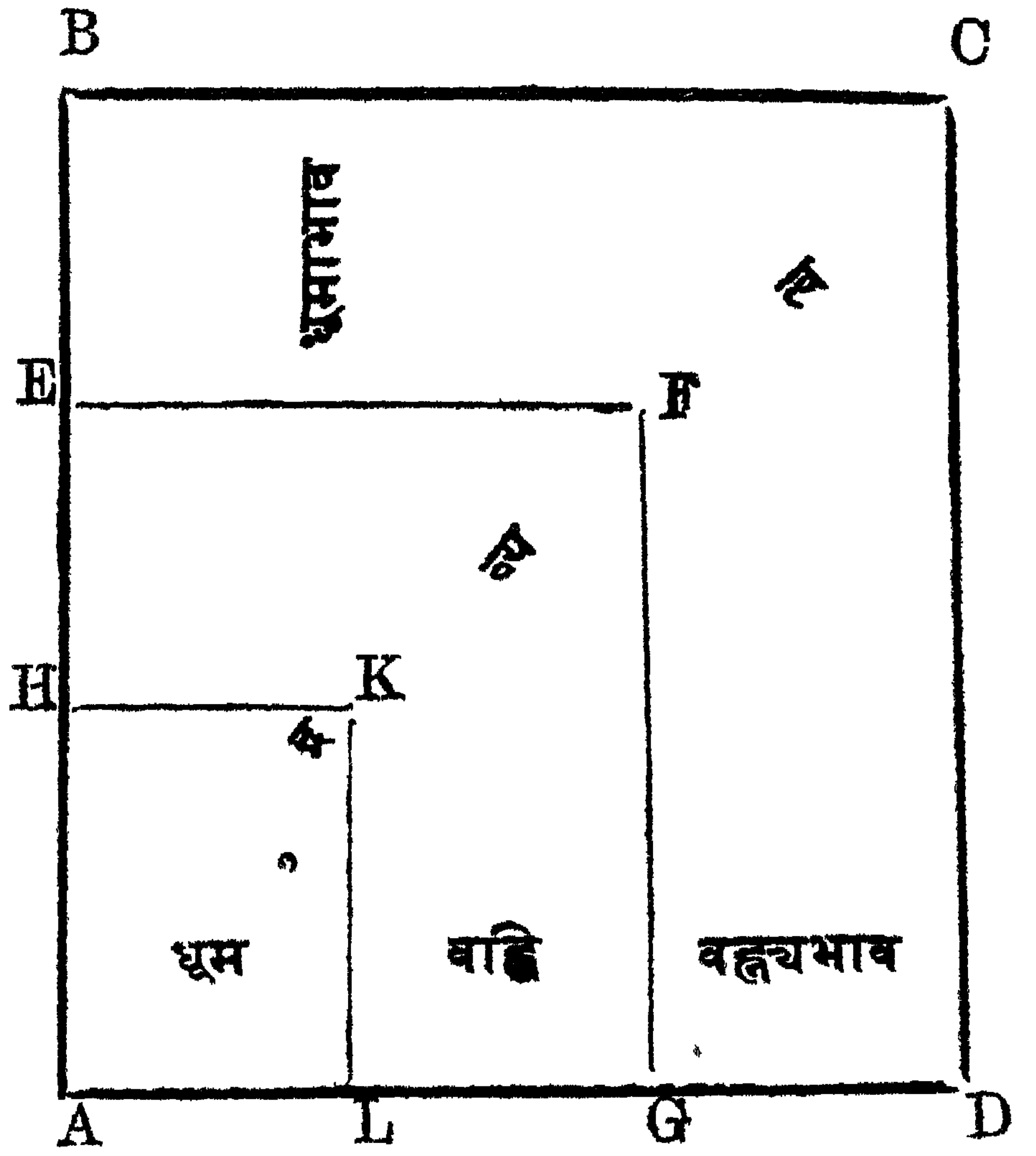
1. Having described the typical syllogism, the author now procdees to treat of the *mark* or 'middle term,' which determines the character of the syllogism and also makes the inference valid or invalid. A *mark* may be true or false, and accordingly a हेतु is either सद्धेतु or असद्धेतु, the latter being usually termed हेत्वाभास. Before adverting to this distinction, it is necessary to tell what a *mark* in general means and how it usually stands in a syllogism. The author therefore first describes the three kinds of लिङ्ग. " The *mark* is of three sorts, *positive and negative*, merely *positive*, and merely *negative*. Of these the first is in invariable concomitance with the साध्य both *affirmatively* and *negatively*, as *smokiness* is with fire. The second has the invariable concomitance *affirmatively* only; and the third *negatively* only. An instance of the second is 'A jar is nameable, for it is knowable,' because both the साध्य 'nameability' and the साधन 'knowability' being here co-extensive, a negative concomitance of theirs, that is, a concomitance of their absolute negations is impossible. The properties of nameability and knowability reside in all things, and so there is no विपक्षदृष्टान्त on which the अभाव of साध्य exists, and hence there

is no व्यतिरेकव्याप्ति. The example of the third kind is ' Earth is distinct from all other *padârthas*, because it has odour. ' In this case there is a विपक्षदृष्टान्त where there is neither odour nor इतरभेद as in water or air, but there is no सपक्षदृष्टान्त where both गन्ध and इतरभेद are concomitant. In the second case therefore we can have only an अन्वयव्याप्ति, such as यत्र यत्र प्रमेयत्वं तत्राभिधेयत्वं यथा घटे, but no व्यतिरेकव्याप्ति, such as यत्राभिधेयत्वं नास्ति तत्र प्रमेयत्वमपि नास्ति, owing to the impossibility of finding a corresponding दृष्टान्त. In the third case we have a व्यतिरेकव्याप्ति, यत्र इतरभेदो नास्ति तत्र गन्धवत्त्वमपि नास्ति, because we have no less than 14 odourless things (the 8 *dravyas* besides earth, plus the remaining 6 *padârthas*), on which the इतरभेद (difference of earth from all other things) does not exist ; but obviously we cannot have any अन्वयव्याप्ति in this case, as neither गन्ध nor पृथिवीतरभेद, which is the same as पृथिवीत्व, exists anywhere but on पृथिवी. In the first case however we have both kinds of व्याप्ति, because we can have both similar and contrary instances. We can say यत्र यत्र धूमस्तत्र वह्निः यथा महानसे, as well as यत्र वह्निर्नास्ति तत्र धूमोऽपि नास्ति, यथा जलह्रदे. । The chief test therefore of discovering to which of these three kinds a *mark* belongs is to see whether there is any सपक्षदृष्टान्त, that is, an instance in which the साध्य coexists with the हेतु, and also a विपक्षदृष्टान्त or a contrary instance in which साध्याभाव co-exists with हेत्वभाव. If both kinds of instances are available then the हेतु as well as the inference in which it is employed are अन्वयव्यतिरेकि; secondly, if the first kind of instance alone is found and not the second, they are केवलान्वयि; and lastly if the second only is found but not the first, they are केवलव्यतिरेकि.

Anvaya and Vyatireka.

2. अन्वय is defined by T. D. as the invariable concomitance of हेतु and साध्य while व्यतिरेक, literally meaning अभाव, is a similar concomitance of their absolute negations. The व्याप्य and व्यापक interchange places in the व्यतिरेकव्याप्ति, that is, the अभाव of वह्नि which is the व्यापक in the अन्वयव्याप्ति becomes व्याप्य of the अभाव of धूम the original व्याप्य. This can be

best illustrated by three squares drawn with two sides of each coinciding thus:—



Let the largest square A C represent any class larger than वह्नि such as द्रव्य, the intermediate figure A F represent the sphere of वह्नि, and the smallest A K represent that of धूम. Now it is clear that the whole space of धूम is covered by that of वह्नि, and so we can say यत्र धूमस्तत्र वह्निः. The square A K will therefore comprise all similar instances such as महानस, यज्ञशाला etc. The gnomen E K G will comprise all instances such as तप्तायःपिण्ड where there is fire but no smoke. In a contrary inference from वह्नि to धूम, the gnomen E K G will correspond to an उपाधि (आर्द्रेन्धनसंयोग) which vitiates a व्याप्ति like यत्र यत्र वह्निस्तत्र धूमः. The gnomen B F D comprises instances where धूमाभाव is co-existent with वह्न्यभाव. This is the region of विपक्षदृष्टान्त which will justify the व्याप्ति, यत्र वह्न्यभावस्तत्र धूमाभावः. The figures also show that the square of वह्नि being larger than that of धूम, वह्नि is व्यापक of धूम. Similarly, the gnomen B K D representing धूमाभाव is larger than the gnomen B F D which represents वह्न्यभाव, and hence धूमाभाव is व्यापक of वह्न्यभाव, the intermediate gnomen E K G again

representing the उपाधि if the व्याप्ति is reversed. The proper व्यतिरेकव्याप्ति therefore runs यत्र यत्र वह्न्यभावस्तत्र धूमाभावः, यथा जलह्रदे ।

Kevalánvayı.

3. T. D. defines a केवलान्वयि लिङ्ग as 'that the साध्य of which is केवलान्वयि;' and a साध्य is केवलान्वयि when its अत्यन्ताभाव exists nowhere, that is, when the साध्य, *e. g.* अभिधेयत्व, is coterminous with the whole class of existing things. It should also be noticed that the केवलान्वयित्व, which T. D. defines as अत्यन्ताभावाप्रतियोगित्व, is that pertaining to the साध्य, and not that of the हेतु, for the total absence of an अत्यन्ताभाव of the हेतु is not necessary for a केवलान्वयि अनुमान. For instance, the syllogism घटोभिधेयः । घटत्वात् । is केवलान्वयि, as there is no व्यतिरेकव्याप्ति, यत्राभिधेयत्वं नास्ति तत्र घटत्वमपि नास्ति; but the हेतु in it is not अत्यन्ताभावाप्रतियोगि, since घटाभाव exists in many places. The essence of a केवलान्वयि therefore consists in the साध्य being co-existent with all existent things. But an objector might say that the illustration in the text is incorrect, since there are many things in the universe which have no names, and which we do not and cannot know, and yet of which the अभाव of प्रमेयत्व or अभिधेयत्व can be predicated. But, says T. D., the अभिधेयत्व and प्रमेयत्व referred to are not those determined by our own limited capacity; they are absolute, and so though a thing may be unknown and unnamed to us, it is still the object of the omniscience of God.

Kevala-vyatireki.

4. The case of केवलव्यतिरेकि is rather complicated. Its essence consists in the साध्य being coterminous with पक्ष, as in the example, पृथिवी इतरभेदाभाववती । गन्धवत्त्वात्. Here we cannot have an अन्वयव्याप्ति, यत्र यत्र गन्धवत्त्वं तत्र पृथिवीतरभेदः, because everything that has गन्धवत्त्व as well as पृथिवीतरभेद *i. e.* पृथिवीत्व, being included in पृथिवी itself, there is no दृष्टान्त apart from the पक्ष. There are plenty of instances, however, on which the साध्याभाव, *i. e.* पृथिवीतरभेदाभाव or पृथिवीतरत्व, is

found coexistent with गन्धाभाव. Any of the eight substances excepting पृथिवी or any of the remaining six categories will serve for such a विपक्षदृष्टान्त.

How earth is proved distinct from other substances

5. Here T. D. indulges in a little argument which is typical of the scholastic subtilities for which *Naiyâyikas* have become so famous. An objector starts up saying that इतरभेद cannot be proved by inference on पृथिवी, and he puts down a dilemma. The साध्य *i. e.* इतरभेद is either previously known or not; if it is known to exist somewhere (elsewhere than earth of course), then the हेतु (गन्ध) either co-exists with it or not. Now if the हेतु co-exists with the साध्य in the other thing, then that is clearly a सपक्षदृष्टान्त and there is an अन्वयव्याप्ति; but if the हेतु co-exists with it in no other thing than earth, then it is a peculiar characteristic of the पक्ष, and there can be no व्याप्ति and no inference based on it. On the other hand, if the साध्य itself is unknown, then of course there can be no अनुमिति; and for this reason. An अनुमिति, such as पर्वतो वह्निमान्, is a विशिष्टज्ञान, that is, knowledge of a mountain, not pure and simple, but as वह्निविशिष्ट 'characterized by fire.' But there is a maxim that a विशिष्ट thing cannot be known without the previous knowledge of the विशेषण; for how can we know a दण्डिन् unless we first know what a दण्ड is. The knowledge of वह्निमत्पर्वत cannot therefore be had without our first having the knowledge of the वह्नि. But by our hypothesis the साध्य, *i. e.* इतरभेद, is unknown; and hence there can be no अनुमिति like इतरभेदवती पृथिवी. Similarly as the knowledge of an अभाव depends on the knowledge of its प्रतियोगि, the इतरभेदाभाव is also unknown, and hence there can be no व्यतिरेकव्याप्ति, यत्र इतरभेदाभावस्तत्रगन्धवत्त्वम्. A केवलव्यतिरेकि syllogism is therefore an impossibility.

A passage in Tarka-Dîpikâ explained.

6. The above dilemma is fairly nettling, although our author does attempt to give some sort of a reply to it in the concluding portion of the commentary. The passage is involved in considerable obscurity. As read by all copies except one

or rather two, it is quite unintelligible, and is probably corrupt; and I have therefore ventured to correct it, on the high authority of *Nîlakantha* and the Ms. J, by transferring the words नान्वयित्वासाधारण्ये to the preceding sentence, and splitting प्रत्येकाधिकरणप्रसिद्ध्या into प्रत्येकाधिकरणे प्रसिद्ध्या. Read thus, the gist of the reply is briefly this. The साध्य in the inference in question is not the cumulative difference of fourteen *padârthas* (8 substances + 6 categories) from earth, which being unobserved on anything other than earth may be unfit to be a साध्य. What is really intended to be proved on earth is the simultaneous existence of the *thirteen mutual negations* of those fourteen *padârthas*. *Mutual negation* exists between two things, and so there are thirteen *mutual negations*, corresponding to the thirteen couples that can be formed out of fourteen *padârthas*, water etc., and residing in thirteen things, excluding that of which the *negation* is spoken of. Thus जलभेद resides in the thirteen things, light etc.; and तेजोभेद resides in all things excepting light. Thus the thirteen *mutual negations* reside in thirteen things at a time, but on none of the fourteen things do all of them exist at *one and the same time*. They do however so exist on earth, and in this respect earth is distinguished from the fourteen things. Our साध्य therefore here is त्रयोदशत्वावच्छिन्नभेदस्यैकाधिकरणवृत्तित्वम्, 'the simultaneous existence of the thirteen mutual negations on one thing.' And as no instance is known on which the existence of this साध्य is previously ascertained, we cannot know whether the हेतु exists there or not; and having thus no knowledge of the हेतु positive or negative, we can neither call it अन्वयि, nor असाधारण. Thus the first horn of the objector's dilemma is disposed of. The second, that the साध्य being unknown there can be no अनुमिति, is also weak, because we have seen that the साध्य which we have taken, namely जलादिभेदकूट, 'aggregate of the thirteen mutual negations of water etc.' is already known by the previous ascertainment of its thirteen components, the thirteen *mutual negations*

severally. But, the objector rejoins, though your thirteen *negations* may be severally known, their aggregate is still unascertained; how can then the साध्य be called प्रसिद्ध? Well, replies the undaunted *Naiyâyika*, I do not recognize an aggregate (समुदाय) as a separate thing from its components, and my साध्य here is not a fictitious thing like समुदाय, but the several *negations* themselves. which, being ascertained on their respective substrata (प्रत्येकाधिकरणे प्रसिद्ध्या), may be inferred conjointly on earth. Consequently there ought to be no difficulty in obtaining a साध्यविशिष्टानुमिति as well as a व्यतिरेकव्याप्ति. The केवलव्यतिरेकि inference is therefore quite possible and valid.

Propriety of kevala-vyatireki

7. We have followed the tedious argument in T. D. simply to show into what absurdities the *Naiyâyikas* have fallen by recognizing a केवलव्यतिरेकि अनुमान. The essence of it, as is pointed out above, is that the साध्य is co-terminous with पक्ष. The साध्य cannot therefore be anything but a peculiar characteristic of पक्ष. Now how can the peculiarity of a thing be known except by actual observation? The syllogism is quite incapable of discovering it. The conclusion in an inference is a particular deduction from the general proposition, and being already contained in it, is not a new piece of knowledge. But an असाधारणधर्म is *ex hypothese* a new fact, and capable of being known only by observation or by induction. This is the gist of the dilemma stated above, while the answer given by T. D. is most unsatisfactory.

8. Why then did the *Naiyâyikas* at all recognize व्यतिरेकि अनुमान which involved them into so much absurdity. Two reasons might be suggested for this; one is historical while the other is purely dialectical. The three-fold division of लिङ्ग and अनुमान is comparatively modern, but it is derived from *Gotama's* division of हेतु into साधर्म्येण and वैधर्म्येण * The

two kinds of हेतु made the उदाहरण, उपनय and निगमन also two-fold; and thus the whole syllogism changed its character according as the हेतु was through similarity or dissimilarity. The साधर्म्य or वैधर्म्य referred to was that of दृष्टान्त, and thus the दृष्टान्त was as it were the key to the whole syllogism. When the दृष्टान्त was enlarged by the addition of the व्याप्तिवाक्य, and thereby sank itself into insignificance, the व्याप्ति became the means of determining the character of the हेतु and the अनुमान as regards their साधर्म्य and वैधर्म्य, or to use their modern equivalents अन्वयित्व and व्यतिरेकित्व. So long as the distinction was confined to व्याप्ति, there was nothing absurd or unintelligible about the doctrine; but the modern school of *Naiyâyikas* in their zeal to carry each and every doctrine of the ancients to its ultimate result, discovered three ways in which the two kinds of व्याप्ति might be used in a syllogism, namely, either each alone by itself, or both optionally. In this way the *mark* (लिङ्ग) became three-fold, according as it was followed by a व्याप्ति that was purely अन्वयि, or purely व्यतिरेकि, or both alternatively. Hence modern writers like *Annambhatta* define a लिङ्ग as one having an अन्वयव्याप्ति or व्यतिरेकव्याप्ति or both. As most inferences have both kinds of व्याप्ति, the class of अन्वयव्यतिरेकि लिङ्ग is the largest and also the most general one, while the other two are exceptional cases which are classed apart bacause they cannot be included in the general category.

Objectons

9. In one sense both the केवलान्वयि and केवलव्यतिरेकि may be said to be defective syllogisms, as lacking one or more characteristics that are requisite for a sound deduction. Properly speaking a deduction ought to be the inference of a particular or a less general proposition from a wider one; but in a केवलान्वयि the साध्यविशिष्टानुमिति is not only no particular case included in the व्याप्ति, but the साध्य is actually co-terminous with the widest generality, namely, Existence (सत्ता). Similarly in a केवलव्यतिरेकि, the साध्य being co-terminous with the पक्ष, there is no middle term between the two, or if there happens to be one it is co-extensive with पक्ष and साध्य (as

in the example given in the text. The three terms being co-extensive, all the premises become equally wide and practically tautologous. The *Naiyâyikas* themselves seem to have been half conscious of the precarious case of the केवल-व्यतिरेकि, for the reply they give to a strong objection, sometimes advanced against it, is anything but convincing. The objection is directed against व्यतिरेकव्याप्ति itself. अनुमिति is the result of परामर्श, and परामर्श is व्याप्तिविशिष्टपक्षधर्मताज्ञान, that is, साध्यव्याप्यलिङ्गज्ञान which can arise only when the साध्यव्याप्यत्व is known to reside in लिङ्ग. Now in a व्यतिरेकव्याप्ति, the साध्याभाव is the व्याप्य of हेत्वभाव, and hence the व्याप्यत्व or व्याप्ति resides in साध्यभाव. But how can a व्याप्ति, residing in one thing, namely साध्याभाव, be the विशेषण of a quite different thing, namely साधन or लिङ्ग, and thus produce the व्याप्तिविशिष्ट-पक्षधर्मताज्ञान ? The *Naiyâyikas*, try to meet this difficulty by making व्याप्तिविशिष्टत्व a property not of पक्षधर्म but of पक्षधर्मता-ज्ञान.* The force of the objection is not however thereby much lessened. The difficulty in short is how can we infer fire from smoke from the invariable concomitance of their negations ? Or to make it still more clear, if a व्यतिरेकानुमान be put in the English *Celarent* (E A E), of which the major premise, *i. e.* व्यतिरेकव्याप्ति, is negative, the conclusion also must be negative, while in the Sanskrit *Nyâya*, we derive a positive conclusion (पर्वतो वह्निमान्) from a negative major premise. This is absurd. The reply of the *Naiyâyikas* is that though the व्याप्ति may reside in साध्याभाव, the साधन is still known as the प्रतियोगि of its अभाव which is व्यापक; and that sort of knowledge of the साधन being an accessory suffices to produce the requisite परामर्श. Hence S. C. says साध्याभावव्यापकीभूताभावप्रतियोगित्वेन साधनस्य पक्षवृत्तित्वज्ञानं सहकारि. But this is a lame explanation after all.

The use of kevala-vyatireki.

10. The true reason for recognizing a व्यतिरेकि अनुमान seems to have been to avoid the necessity of having a fifth proof called अर्थापत्ति (Presumption). The instances which the *Mîmâṁsakas* give of अर्थापत्ति are all included by *Naiyâyikas* in their केवलव्यतिरेकि अनुमान. The analoguous reasoning from तर्क or *Reductio*

* Vide Note p. 243, *Supra.*

ad absurdum would also come under the same head, and in fact all conclusions that cannot be proved directly (*e. g.* जीवत् शरीरं सात्मकं प्राणादिमत्त्वात्) will be proved by the *Naiyâyikas* by केवलव्यतिरेकि. Those of course who, like the *Mîmâmsakas* and the *Vedântins*, accept अर्थापत्ति as proof, dispense with not only the केवलान्वयि and केवलव्यतिरेकि but the whole व्यतिरेकि अनुमान altogether. The strictures passed by the *Vedânta-Paribhâshâ* upon the *Nyâya* doctrine of व्यतिरेकि inference are instructive and deserve to be quoted in full:— तच्चानुमानमन्वयिरूपमेकमेव न तु केवलान्वयि सर्वस्यापि धर्मस्यास्मन्मते (अद्वैतमते) ब्रह्मनिष्ठात्यन्ताभावप्रतियोगित्वेनात्यन्ताभावाप्रतियोगिसाध्यकत्वरूपकेवलान्वयित्वस्यासिद्धेः। नाप्यनुमानस्य व्यतिरेकिरूपत्वं साध्याभावे साधनाभावनिरूपितव्याप्तिज्ञानस्य साधनेन साध्यानुमितावनुपयोगात्। कथं तर्हि धूमादावन्वयव्याप्तिमविदुषोऽपि व्यतिरेकव्याप्तिज्ञानादनुमितिः। अर्थापत्तिप्रमाणादिति वक्ष्यामः॥*

SECTIONS. IL, L, LI. पक्षः, सपक्षो विपक्षश्च.

A subject is one where the thing to be proved is doubted, as mountain when smokiness is the reason.

A similar instance is one where the thing to be proved is ascertained, as kitchen in the same case.

A contrary instance is that where the absence of the thing to be proved is ascertained, as a lake in the same case.

1. In these three short sections, *Annambhatta* defines three terms which constantly occur in connection with the syllogism. "A पक्ष, *place* or *subject*, is, that on which the existence of the thing to be ascertained is doubtful, as the mountain in an inference of fire from smoke. A सपक्ष or similar instance is that on which the existence of the thing to be ascertained is already known, as the culinary hearth in the same inference. A विपक्ष or contrary instance is that on which the *negation* of the thing to be ascertained is definitely known, as a great lake in the same inference." *Annambhatta* has given the simplest definitions of the terms, probably copied by him from *Gangeśa's Tattva-Chintâmani*, while most of the others such as that of N. B. are merely variations of it. The सपक्ष and विपक्ष of later *Naiyâyikas* of course correspond respectively to the instances by simi-

Paksha, Sapaksha and Vipaksha.

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* *Ved. Par.* Calc. ed. p. 14.

larity and dissimilarity mentioned by *Gotama*, and are employed to illustrate अन्वयव्याप्ति and व्यतिरेकव्याप्ति respectively.

2. The definition of पक्ष is however open to an objection. It is *prima facie* incorrect because it does not apply to cases where we infer a thing, even though it may have been previously ascertained by other proofs such as *Perception* or *Word.* We have for instance the injunction of the *Śruti*, आत्मा वाऽरे द्रष्टव्यः श्रोतव्यो मन्तव्यो निदिध्यासितव्यः* । in which आत्मा is first directed to be heard and then reflected, and then contemplated upon. श्रवण is acquiring the knowledge of the Soul from the Vedas, while मनन comprehends reasoning or inference. But how can inference work if the Soul is already ascertained by श्रवण, and is therefore no longer संदिग्ध ? And yet the injunction being that of infallible *Śruti* cannot be groundless. It is not necessary therefore that the पक्ष in an inference must be संदिग्ध. Besides even in ordinary life we often practise inference, although the साध्य is actually observed or otherwise ascertained, as when we wish to corroborate our observation of fire on the mountain by the additional evidence of an inference. The definition of पक्ष is therefore inaccurate. The author's reply to this objection is not quite clear. The true definition of पक्ष, says T. D., is "a thing which is the substratum of the पक्षता as already defined, *viz.* सिषाधयिषाविरहसहकृतसिद्ध्यभावः".† That is quite, true, but does the author thereby admit that the definition of पक्ष given here is wrong ? And if so, why did he insert it at all ? The difficulty will, however, be removed by taking the word संदिग्ध in the sense of, not doubtful absolutely, but doubtful for the time being, or doubtful in the precise way in which an inference ascertains the साध्य. The आत्मा for instance might have been known from *Śruti*, but mere verbal knowledge of a thing is not sufficient to dispel all doubts and questionings which often obstruct the free working of the intellects. Arguments of both साधक and

An objection.

* *Brihad. Ār. Up.* IV. 5, 6.

† Vide Note 6 Under Sect. 44, p. 240, *supra*.

बाधक kinds are needed to remove these doubts and make our knowledge absolutely certain. Similarly though fire may have been actually observed, our senses often mislead us, and there is no positive certainty until independent reasoning corroborates the evidence of our senses. In this sense of course the साध्य is still doubtful, even though it has been previously known.

What is a good hetu.

3. It is rather strange that *Annambhatta*, after having described the general nature of a *mark*, did not, before proceeding to the हेत्वाभास or *invalid reasons*, mention the distinctive characteristics of *valid marks*. The desideratum however has been supplied by the writers of other manuals, such as *Tarka-Kaumudi* and *Tarkâmrita*. These essentials of सद्धेतु are five, and are thus described in T. K.:—त्रयाणां मध्ये योऽन्वयव्यतिरेकी स पञ्चरूपोपन्न एव स्वसाध्यं साधयति। तानि पञ्च रूपाणि पक्षधर्मत्वम्, सपक्षे सत्त्वम्, विपक्षाद्व्यावृत्तिः, अबाधितविषयत्वम्, असत्प्रतिपक्षत्वं चेति.* The five requisites of a good हेतु are,—(1) existence on the पक्ष, of course at the time of making the inference; (2) existence on सपक्ष दृष्टान्त; (3) non-existence on the विपक्ष; (4) non-contradiction of the subject matter by another stronger proof; and (5) absence of a counter-balancing reason on the other side, proving the negation of साध्य. The first three conditions are obviously deducible from what has been already said about the nature of the पक्ष, सपक्ष and विपक्ष. The latter two belong to the matter rather than to the form of the inference. These five requisites are necessarily present in an अन्वयव्यतिरेकि हेतु; but the other two, केवलान्वयि and केवलव्यतिरेकि, being exceptional, are by their very nature wanting in one requisite each, and therefore pass on with four only. The केवलान्वयि cannot have विपक्षव्यावृत्ति because there is no विपक्ष in its case; while a केवलव्यतिरेकि cannot have सपक्षसत्त्व owing to the absence of सपक्ष itself. With these two exceptions, the requisites are essential to all inferences, and the absence of any one of them gives rise to the several fallacies. Thus the want of पक्षधर्मत्व produces आश्रयासिद्ध and स्वरूपासिद्ध;

that of सपक्षसत्त्व, असाधारण-सव्यभिचार and अनुपसंहारि; that of विपक्षासत्त्व, व्याप्यत्वासिद्ध, विरुद्ध and साधारण-सव्यभिचार; and the absence of the last two gives rise to बाधित and सत्प्रतिपक्ष respectively.* This will be fully understood when the nature of the several fallacies has been explained.

Another view.

4. The author of *Nyâya-Bindu* mentions only the first three as the requisites of a good हेतु, omitting the last two, perhaps because they pertain more to the matter than to the form of the हेतु, and involve what are called material fallacies. He describes this त्रिरूपहेतु thus:—"त्रैरूप्यं पुनर्लिङ्गस्यानुमेये (*i. e.* पक्षे) सत्त्वमेव । सपक्ष एव सत्त्वम् । असत्पक्षे चासत्त्वमेव निश्चितम् । † The *Vaiśeshikas* too would seem to recognize a त्रिरूपहेतु. The whole *Nyâya* theory of valid reasons and the five kinds of fallacies is as a matter of fact deduced from this three-fold character of the हेतु.

SECT. LII. हेत्वाभासाः.

There are five fallacies, viz:—1. Discrepancy, 2 Contradiction, 3 Ambiguity, 4 Futility and 5 Falsity.

Fallacies.

1. The next six sections deal with the five groups of fallacies, an accurate knowledge of which is necessary to ensure sound reasoning. It is often as necessary to know what we are to avoid as to know what we are to accept, and hence a treatise on Logic can never be complete without a description of the various fallacies to which an inference is liable. The word हेत्वाभास is capable of two derivations and two meanings. It means a *fallacious reason*, (दुष्टो हेतुः) if dissolved either as हेतुवदाभासते 'that which looks like a हेतु but is not हेतु,' or as हेतोराभासः सदृशः 'that which resembles a हेतु.' If dissolved as हेतोः हेतौ वाऽऽभासः the word would mean a *fallacy* (हेतुदोषः). *i. e.* the error which underlies the apparent हेतु and makes it invalid. The difference between the two meanings is important, because it must be noted that the five-fold divison of fallacies is really based on the different kinds of हेतुदोष and not on those of दुष्टहेतु.

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* V. S. Up. Calc. ed. p. 160.

† *Nyâya-Bindu-Tîkâ* Bib. In. p. 104.

The reason of this distinction is that a single हेतु may often be vitiated by two or more errors occurring at once, each of which would fall under one or the other of the five classes; but their combination will not make a separate kind of हेत्वाभास. Such a हेतु might in fact be classed under as many heads as there are fallacies involved in it. Thus it we take the syllogism, वायुर्गन्धवान् स्नेहात् । the हेतु स्नेह will be found to fall under all the five heads of हेत्वाभास. Similarly in घटः पटोऽस्ति कुड्यत्वात्, the हेतु कुड्यत्व has fallacies of all kinds. In ह्रदो वह्निमान् धूमात्, the हेतु is of three kinds: बाधित, सत्प्रतिपक्ष and स्वरूपासिद्ध; while in पर्वतो धूमवान् वह्नेः, the हेतु would be both साधारणसव्यभिचार and व्याप्यत्वासिद्ध. If the division had been applied to दुष्टहेतु instead of हेतुदोष, how could these mixtures of several fallacies have been classed? They can neither be put under one only of the possible heads, nor form an independent class. Hence *Naiyâyikas* have adopted the better plan of classifying all the fallacies or errors that are possible in a हेतु, and then denominating a हेतु which possessed one or more of them as fallacious in so many ways. The author of *Dîdhiti* remarks to the same effect: 'एकस्यैव स्नेहस्य 'अनैकान्तिकः,' 'विरुद्धः' इत्यादिपञ्चत्वव्यवहारः कथम्' इत्याशङ्कायामुत्तरम्—'उपाधेयसंकरेऽप्युपाध्यसंकरः' इति न्यायाद्दोषगतसंख्यामादाय दुष्टहेतौ पञ्चत्वादिसंख्याव्यवहारः; that is, 'the fallacious reasons are divided into five classes not because only five varieties of them are possible, but because the errors which underlie them are of so many kinds.' The correct method for a *Nyâya* writer would therefore be to classify and define the five हेतुदोषs or fallacies and then to define a दुष्टहेतु as one that is infected with one or more of them.

2. *Annambhatta* has avoided the difficulty by simply enumerating in the text only the five kinds of दुष्टहेतुs without defining हेत्वाभास (दुष्टहेतु) in general, and then adding the definition of a हेतुदोष as added in T. D. The remark of *Nîlakaṇṭha* shows that the word हेत्वाभास is used by the author in two different senses in the text and in the commentary. In the text it means a दुष्टहेतु, since the five class-names given are names of the हेतुs, while the definition in T. D. is that usually given of a हेतुदोष. The five errors in a हेतु corresponding to the five दुष्टहेतुs mentioned in the text

are given by N. B., as व्यभिचार (discrepancy), विरोध (contrariety), प्रतिपक्ष (counter-balance) असिद्धि (inconclusiveness) and बाध (absurdity). The five *apparent reasons* which derive their names from these errors are respectively called सव्यभिचार (discrepant, or inconsistent), विरुद्ध (contrary), सत्प्रतिपक्ष (counter-balanced), असिद्ध (inconclusive) and बाधित (absurd or futile).

Errors or defects of reason.

3. T. D. defines a हेतुदोष as अनुमितिप्रतिबन्धकयथार्थज्ञानविषयः, 'that which is the subject of a right knowledge which prevents a judgment.' The errors named above prevent a conclusion that would otherwise follow from the *reason* given. Thus in the syllogism ह्रदो वह्निमान् धूमात्, the judgment that the lake is fiery would follow in due course, if it were not for our certain knowledge that there is no smoke on the lake. This knowledge becomes therefore अनुमितिप्रतिबन्धक, and the subject of that knowledge, namely the absence of smoke on the lake, becomes a हेतुदोष. But why say यथार्थज्ञान? The word यथार्थ is used to prevent an erroneous knowledge of a दोष from obstructing even a valid अनुमिति. As for example, our familiar syllogism पर्वतो वह्निमान् धूमात् may be opposed by an erroneous perception that there is no fire on the mountain. The वह्न्यभावप्रत्यक्ष however being only a भ्रम ought not to make the हेतु in पर्वतो वह्निमान् बाधित etc.; and hence the restriction that the knowledge of बाध or any other हेतुदोष must itself be *right knowledge*, and not a भ्रम merely.

4. The definition however is imperfect in another way, because it does not cover those हेतुदोषs, such as व्यभिचार, विरोध, साधनाप्रसिद्धि and स्वरूपासिद्धि, which do not prevent an अनुमिति *directly* but only *indirectly*, by preventing व्याप्तिज्ञान or हेतुज्ञान or परामर्श, and are thus अन्यथासिद्ध themselves so far as अनुमितिप्रतिबन्ध is concerned. *Nīlakaṇṭha* therefore remarks, तत्रानुमितिपदमजहल्लक्षणयाऽनुमितितत्करणान्यतरपरम् । तेन व्यभिचारादिज्ञानस्य परामर्शप्रतिबंधकतयैव निर्वाहादनुमित्यप्रतिबंधकत्वेऽपि व्यभिचारादिष्वनाव्याप्तिः. The word अनुमिति in the definition is to be enlarged so as to include अनुमितिकरण that is परामर्श, व्याप्तिज्ञान or

लिङ्गज्ञान, whatever it may be. In this way व्यभिचार and other दोषs which *directly* affect the अनुमितिकरण only but not the अनुमिति, will be included in the definition. The same result might be obtained, says the author of the *Dîdhiti*, by taking अनुमिति to mean not a simple judgment पर्वतो वह्निमान्, but विशिष्टानुमिति, as वह्निव्याप्यधूमवान् पर्वतो वह्निमान्. Other writers like T. K. avoid the difficulty by actually introducing the word तत्करण after अनुमिति in the definition.

Erroneous reasons or fallacies.

5. After knowing what a हेतुदोष is, it is easy to define a दुष्टहेतु as निरुक्तदोषवान्. Another definition of a दुष्टहेतु given by T. B. and *Śankara Miśra* is यस्य हेतोर्यावन्ति रूपाणि गमकतौपयिकानि तदन्यतररूपहीनः. 'wanting in any of the five or four requisites of a good हेतु.' * This latter definition is simpler as well as more scientific, because it takes away the necessity of recognizing so many हेतुदोषs, all of which can in fact be reduced to the absence of one or more of the five requisites of a सद्धेतु.

6. Although all writers are practically agreed as to the definition of a हेत्वाभास, there is no such unanimity about their number. The chief divergence of views is between the *Naiyâyikas*, who on the authority of *Gotama* recognize five fallacious reasons mentioned by *Annambhatta*, and the *Vaiśeshikas*, who following *Kaṇâda* accept only three, namely, सव्यभिचार, विरुद्ध and असिद्ध. The divergence is not however radical, for the last two, सत्प्रतिपक्ष and बाधित, which *Gotama* enumerates separately, are included by *Vaiśeshikas* either under आश्रयासिद्ध or under सव्यभिचार or अनैकान्तिक as it is often called.† Again the names of the several हेत्वाभासs are not the same in all books. *Gotama* names the five as सव्यभिचार, विरुद्ध, प्रकरणसम, साध्यसम and अतीतकाल.‡ Of these the first two are identical with those given by *Annambhatta*. प्रकरणसम is defined as that which leaves the conclusion

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* V. S. Up. Calc. ed. p. 159.

† *Ibid* p. 150

‡ G S. I. 2, 45.

doubtful, owing to the opposition of an equally strong argument on the other side,* and is therefore the same on our सत्प्रतिपक्ष. A साध्यसम हेतु is that which is as doubtful as the साध्य, and which is therefore असिद्ध. कालातीत corresponds to our बाधित. *Kanâda's* aphorism† is a little obscure, but his doctrine is unmistakably summed up in the verse of an unknown writer, quoted by *Praśastapâda*, विरुद्धासिद्धसंदिग्धमलिङ्गं काश्यपोऽब्रवीत् । ‘ *Kâśyapa* or *Kanâda* declared three false reasons, विरुद्ध, असिद्ध and संदिग्ध. ’ Of these विरुद्ध and असिद्ध are the same as ours, while संदिग्ध corresponds to सव्यभिचार or अनैकान्तिक. A fourth one named अनध्यवसित is also added by some writers, but it is, says *Śankara Miśra*, identical with अनुपसंहारि and therefore comes under अनैकान्तिक. *Buddhists, like the author of *Nyâya-Bindu*, adopt the enumeration and terminology of *Kanâda*. The sub-divisions of सव्यभिचार and असिद्ध appear to be the work of modern writers.

Formal and Material fallacies.

7. It is obvious that the difference between *Gotama* and *Kanâda* mainly lies in the recognition of सत्प्रतिपक्ष and बाधित. These together form a separate group of *material* fallacies, as distinguished from the other three, which may for convenience be called *formal* fallacies.*Many European logicians regard *material* fallacies as being out of the province of logic, and a similar reason may have prompted *Kanâda* to exclude सत्प्रतिपक्ष and बाधित from his list of हेत्वाभासs. The exclusion of असत्प्रतिपक्षत्व and अबाधितत्व, (which correspond to the two हेत्वाभासs सत्प्रतिपक्ष and बाधित) by some writers from among the five requisites of a good हेतु may be accounted for on the same ground.*It must however be stated to prevent any misunderstanding, that there is in Indian Logic no such clearly-marked division of *formal* and *material* fallacies as was laid down by Aristotle under the two names of *fallacia in dictione*, and *fallacia extra dictionem*. It will be found later on that some varieties of अनैकान्तिक and असिद्ध when reduced to an English syllogism, disclose *material* fallacies, while others are formal

* G. S. 2, 48.

† V. S. III. I, 15.

fallacies. The fact is that the peculiar form of Sanskrit syllogism did not permit a clear demarkation of *formal* form *material* fallacies, nor are the two so separated in practice. Most of the so-called *formal* fallacies involve *material* misconceptions or over-statements, while almost all the *material* fallacies can be avoided by a strict adherence to the syllogistic *form*. The distinction is purely artificial, and has not been observed by the *Naiyâyikas*.

SECT. LIII. सव्यभिचारः

The discrepant reason is one that coexists partially. It is threefold, over-wide, peculiar and non-exclusive. One that coexists with negation of the thing to be proved is over-wide; e. g. mountain is fiery because it is knowable, since knowability exists with absence of fire on a lake. Peculiar is that which is not found either in similar or contrary instances; e. g. Sound is eternal because it is Word. The genus word is absent from all eternal and non-eternal things, and resides in Sound only. Non-exclusive is that which has neither similar nor dissimilar instances; e. g. Every thing is transitory because it is knowable. Here everything being the subject of inference there is no separate example.

Discrepant reason.

1. सव्यभिचार is व्यभिचारेण सह वर्तमानः 'that which involves a व्यभिचार or *discrepancy* of the हेतु with the साध्य.' It is defined as अनैकान्तिक, or 'coexisting with the साध्य only partially.' Thus if one says नित्यः शब्दोऽस्पर्शत्वात्, यत्र यत्रास्पर्शत्वाभावः (स्पर्शवत्त्वं) तत्र तत्रानित्यत्वं यथा मृत्कुम्भे।, the हेतु will be अनैकान्तिक or व्यभिचरित, because there are the earthy atoms which though स्पर्शवत् are नित्य just as there is बुद्धि which is both अस्पर्श and अनित्य. Hence the व्याप्ति is not correct; that is, the हेतु coexists partially with the साध्य, partially with the साध्याभाव, and entirely with neither. *Vâtsyâyana* explains the word अनैकान्तिक as, नित्यत्वमेकोऽन्तः। अनित्यत्वमेकोन्तः। एकस्मिन्नन्ते विद्यत इति ऐकान्तिकः विपर्ययादनैकान्तिक उभयान्तव्यापकत्वात्* । The word सव्यभिचार implies the same thing, for व्यभिचार or सव्यभिचारत्व has been defined साध्यसंदेहजनकोभयकोट्युपस्थापकतावच्छेदकरूपवत्त्वम्, that is, 'it is a property which leads to the proof of both साध्य and its negation, and thus causes doubt about the साध्य'. The सव्यभिचार has a tendency to prove both साध्य and its negation because it is coexistent with both; and the

* *Vât.* on. G. S. I, 2, 56.

simultaneous knowledge of these two extremes, produces संदेह of the साध्य which is उभयकोटिकज्ञान. Hence *Kanâda* calls अनैकान्तिक by the name of संदिग्ध.

Its three varieties

2. सव्यभिचार is sub-divided into three varieties साधारण (*Over-wide*), असाधारण, (*Peculiar*) and अनुपसंहारी (*Non-exclusive*). Of these साधारण or the *over-wide mark* is 'that which is found both on the सपक्ष and the विपक्ष, that is, which co-exists both with साध्य and its negation. *Annambhatta* defines a साधारण simply as one that coexists with साध्याभाव, but the full definition would be that given by T. K. सपक्षविपक्षवृत्ति. The reason why *Annambhatta* omits सपक्षवृत्तित्व from his definition is that it is necessarily implied in an अन्वयि हेतु, such as the साधारण is, and need not therefore be particularly mentioned. As an illustration of साधारण the author gives "Mountain is fiery, because it is knowable"; where the reason 'knowability,' exists both in things known to possess fire as the ordinary hearth, and also things that have no fire, as a lake. The प्रमेयत्व being thus associated with both वह्नि and वह्न्यभाव, there is no reason why one should be inferred from it and not the other; but both cannot exist together and hence the हेतु is fallacious. Similarly in पर्वतो धूमवान् वह्नेः, the हेतु वह्नि is साधारण, being found to co-exist both with धूम in महानस and with धूमाभाव in अयोगोलक.

Over-wide mark.

Peculiar mark.

3. The असाधारण or *Peculiar* is just the opposite of साधारण, being found neither in सपक्ष nor in विपक्ष. Its absence in the विपक्ष is of course natural, because even a good हेतु is non-existent in विपक्ष; but the fallacy of असाधारण consists in its being absent in सपक्ष also. If the साधारण is over-wide, owing to its trespassing in the forbidden reason of विपक्ष, this is not wide enough as it does not even cover the legitimate ground of सपक्ष. One errs on the side of excess, the other on that of defect; and thus both are equally fallacious. The असाधारण, in fact, as its name denotes

is a peculiar characteristic of the पक्ष which exists nowhere else, and for which therefore no सपक्षदृष्टान्त can be found. As for example, if we say, "Sound is eternal, because it has the nature of sound," the nature of sound, शब्दत्व, is a peculiar characteristic of sound ; and being so, can lead to no valid conclusion. In this case the सपक्ष instances, *e. g.* those having the साध्य नित्यत्व, would be ether and other eternal things, while the विपक्ष instances would be all non-eternal products, such as a jar. The हेतु शब्दत्व exists in neither, and hence it is called असाधारण.

Non-exclusive mark.

4. The third variety of सव्यभिचार is अनुपसंहारि (Non-exclusive) which is defined in the text as 'one that has neither a सपक्ष nor a विपक्ष दृष्टान्त,' that is, which is never present where the साध्य is present, excepting of course the पक्ष itself. Now this can happen only when all things in this world are included in पक्ष, and so nothing is left outside the range of पक्ष that can be denominated सपक्ष or विपक्ष. The definitions given in T. K. and T. A. make this quite clear. They are, वस्तुमात्रपक्षकः or सर्वपक्षकः, 'one in which the universality of things is the पक्ष,' that is one in which the साध्य is unascertained (संदिग्ध) of all things in the world, and there is therefore no सपक्ष or विपक्ष where the साध्य or its negation might be said to be ascertained (निश्चित). The example given in the text is "All things are transient, because they are knowable, " where सर्व being the पक्ष, there is no सपक्ष or विपक्ष apart from it. But why cannot the individuals, says an objector, serve as सपक्ष or विपक्ष? that is, why cannot we argue, सर्वमनित्यं । प्रमेयत्वात । यत्र यत्र प्रमेयत्वं तत्रानित्यत्वं । यथा घटे पटे कुड्ये वा ।? It cannot be said that the साध्य being संदिग्ध in सर्व, it is necessarily so in घट, पट and कुड्य ; for first the साध्य (प्रमेयत्व) may be निश्चित in the पक्ष at one time, and be संदिग्ध at another ; and secondly uncertainty as to the *whole* does not necessarily imply an equal uncertainty as to individuals or *some* parts of that whole. घट and पट therefore which are certainly transient might very well serve as सपक्षदृष्टान्त to prove अनित्यत्व on सर्व. To remove this objection modern

Naiyâyikas define an अनुपसंहारि as केवलान्वयिधर्मसाध्यकः 'one in which the साध्य is only positively connected with the हेतु,' and so there is neither a व्यतिरेकव्याप्ति nor a व्यतिरेकदृष्टान्त. But this latter definition also is faulty, as it would apply even to a केवलान्वयि सद्धेतु. The proper answer to the first objection would be that in an अनुपसंहारि, although there may be individual things in which the अनित्यत्व is ascertained, there is no व्याप्ति either of the अन्वयि or of the व्यतिरेकि kind, since the conclusion itself constitutes the widest possible generalization. The name अनुपसंहारि, (Non-exclusive) is given to this fallacy because the पक्ष being universal nothing is excluded from it.

5. Now it may be asked, why are these three fallacies, apparently so dissimilar, and the last a quite anomalous case, classed under सव्यभिचार? A closer examination of the definitions and examples of the three varieties will however show that there is a common principle underlying the division, and that principle is derived from the general definition of सव्यभिचार itself.

The three-fold division explained.

A सव्यभिचार or *discrepant* reason has been defined as 'one which is not uniformly concomitant with साध्य,' that is, which uniformly exists neither with साध्य nor with साध्याभाव. It is neither purely अन्वयि, nor purely व्यतिरेकि, nor both completely, but half of this and half of that. It is thus defective in either or both of the two requisites of a सद्धेतु, namely, सपक्षसत्त्व and विपक्षव्यावृत्ति. Now there are four and only four ways in which the two properties may be predicated of a हेतु, namely, both may be present, both may be absent, or either may be present when the other is absent. Thus we have four cases: (1) presence of both सपक्षसत्त्व and विपक्षव्यावृत्ति; (2) absence of both of them; (3) presence of सपक्षसत्त्व, but absence of विपक्षव्यावृत्ति; (4) absence of सपक्षसत्त्व but presence of विपक्षव्यावृत्ति. The first is undoubtedly a case of सद्धेतु, as both the requisites are present, and may therefore be left out. In the latter three cases the हेतु is

obviously defective, and is respectively called अनुपसंहारि, साधारण and असाधारण. अनुपसंहारि has been defined as one that has neither a सपक्ष nor a विपक्षदृष्टान्त; that is, there is no सपक्ष on which the हेतु co-exists with साध्य, nor a विपक्ष from which the हेतु is व्यावृत्त just as the साध्य is. अनुपसंहारि has therefore neither of the two properties, सपक्षसत्त्व and विपक्षव्यावृत्ति. The third case is that of a साधारण which is defined as existing both on the सपक्ष and the विपक्ष; that is, there is सपक्षसत्त्व but no विपक्षव्यावृत्ति. The fourth is असाधारण which, as non-existing on both सपक्ष and विपक्ष instances, possesses only विपक्षव्यावृत्ति, but not सपक्षसत्त्व. The three varieties are thus nothing but the three possible ways in which the अनैकान्तिकत्व (defectiveness) of a सव्यभिचार may occur.

Kevalânvayı and Kevalavyatıreki distinguished.

6. One more point remains to be noticed in connection with these, and especially the last two साधारण and असाधारण, namely, in what respect they do respectively differ from केवलान्वयि and केवलव्यतिरेकि सद्धेतुs. The instances of साधारण and असाधारण given in the text are very similar to those given for केवलान्वयि and केवलव्यतिरेकि, and no distinction can at first sight be made between the two pairs. A comparison of the illustrations will however show the difference. Thus पर्वतो वह्निमान् प्रमेयत्वात् is a साधारण, while पर्वतोऽभिधेयः प्रमेयत्वात् is a केवलान्वयि. The difference between the two lies in the साध्य which is co-extensive with the हेतु in the latter case, but not so in the fiirst. Similarly पृथिवीतरेभ्यो भिद्यते पृथिवीत्वात् or गन्धवत्त्वात् । is केवलव्यतिरेकि while पृथिवी नित्या पृथिवीत्वात् will be असाधारण, the difference being the same, namely, that the साध्य in a केवलव्यतिरेकि is co-extensive with the हेतु, but not so in the असाधारण. Now why should this differeuce make one a good and the other a bad inference? The reason is obvious. When the साध्य and हेतु coincide with each other, there is no व्यभिचार or discrepancy between the two, although we cannot always have a सपक्ष or विपक्षदृष्टान्त. The essence of साधारण and असाधारण lies not so much in the absence of सपक्ष or विपक्ष दृष्टान्त, but in the imperfect generalization, the absence of the दृष्टान्त only indicating the व्यभिचार or defect in the व्याप्ति.

SECT. LIV. विरुद्धः

Contrary reason is that which is pervaded by the negation of the thing to be proved, e. g. Sound is eternal because it is created. Creatibility is covered by the negation of eternity or transitoriness.

1. विरुद्ध or *contrary* reason is 'that which is less extensive than the negation of साध्य and is never coexistent with साध्य.' As when we say, 'Sound is eternal, because it is artificial,' the reason, 'artificialness' coincides with नित्यत्वाभाव or अनित्यत्व and not with नित्यत्व. We have the व्याप्ति, यत्र यत्र कृतकत्वं तत्रानित्यत्वं यथा घटे, but not यत्र यत्र कृतकत्वं तत्र नित्यत्वम्. The हेतु कृतकत्व being thus नित्यत्वाभावव्याप्य, it becomes a साधक or हेतु of that अभाव, and not of its प्रतियोगि नित्यत्व; that is, the *artificialness* of sound is exactly the reason why sound should be non-eternal. Thus the fallacy consists in drawing a conclusion just *contrary* to that which would be justified by the reason. This accords well with *Gotama's* definition सिद्धान्तमभ्युपेत्य तद्विरोधी विरुद्धः* 'a विरुद्ध is that which is *contrary* to the conclusion desired to be drawn.'

Contrary reason.

2. विरुद्ध differs from साधारण सव्यभिचार in never existing on the सपक्ष as the latter does; while it differs from असाधारण in existing on the विपक्ष unlike the latter which does not. The chief distinction between सव्यभिचार and विरुद्ध is that in the former the व्याप्ति is only imperfect or defective, while in the latter it is actually *contrary*. There is only a *discrepancy* in the first; there is direct *opposition* in the second.

SECT. LV. सत्प्रतिपक्षः

The ambiguous or inconclusive reason is that wherein there is another reason proving the negation of the thing to be proved; e. g. Sound is eternal, because it is audible like any other sound; and sound is non-eternal, because it is a creation like a jar.

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* G. S. I 2. 47.

Satpratipaksha or Counter-balanced reason.

The सत्प्रतिपक्ष differs from a विरुद्ध in this, that while in the latter the very same हेतु which ought to prove साध्याभाव is given as a reason for proving the साध्य, in सत्प्रतिपक्ष the हेतु which proves साध्याभाव is different (हेत्वन्तर) from that actually given. For example, if we say 'Sound is eternal, because it is apprehended by the organ of hearing', the हेतु given, namely श्रावणत्व, does not prove नित्यत्व; but neither does it prove नित्यत्वाभाव. The अनित्यत्व however is proved by another हेतु, कृतकत्व, in such an inference as, 'Sound is non-eternal, because it is artificial.' In विरुद्ध the हेतु is inconsistent with साध्य in the same inference; in सत्प्रतिपक्ष it is inconsistent with the साध्य in a contrary inference. सत्प्रतिपक्ष is classed by *Vaiseshikas* under बाधित, of which it is in one sense a species; but there is a clear distinction between the two. In बाधित the साध्य of the inference in question is actually disproved by a stronger proof of another kind, such as *perception*: as for instance, if one says "Fire is cold because it is a substance," the अनुष्णत्व is proved to be false by our actual *perception* of the heat of fire, according to the maxim प्रत्येक्षणानुमानं बाध्यते. In सत्प्रतिपक्ष there is no such बाध of the inference by a stronger proof, but only a counter-balancing of two inferences, which being of equal weight, are mutually destructive, but neither prevails over the other. This peculiarity of सत्प्रतिपक्ष was well expressed by the more significant name, प्रकरणसम (Inconclusive) which *Gotama* gave it. *Gotama's* definition of प्रकरणसम is यस्मात्प्रकरणाचिन्ता स निर्णयार्थमपदिष्टः प्रकरणसमः ।* प्रकरण is an argument, and its चिन्ता is the curiosity (जिज्ञासा) or expectancy (आकांक्षा) which is created in the course of the argument, and remains until it is satisfied by a certain and well-grounded conclusion. An inference which is inconsequential owing to being *counter-balanced* [or opposed by a contrary inference of equal weight] does not remove this प्रकरणाचिन्ता; and hence a प्रकरणसम is defined as 'a हेतु which though propounded for the purpose of giving a certain conclusion (निर्णयार्थमपदिष्टः) leaves the expectation of a certain conclusion unfulfilled.' It is therefore प्रकरणसम, that is, as *Vâtsyâyana* explains it, प्रकरणमनातिवर्तमानः 'always remaining in the stage of a non-concluded argument.' The word सत्प्रतिपक्ष also conveys the same sense, but rather distantly. The author of *Dîdhiti* interprets it as सन्

* G. S. I, 2, 48.

(विद्यमानः) विरोधिव्याप्त्यादिमत्तया परामृश्यमाणो हेतुः विरोधिपरामर्शो वा यस्य परामृश्यमाणस्य हेतोरसौ सत्प्रतिपक्षः । To understand this derivation, it must be observed that when there are two mutually destructive inferences containing the two हेतुs that are सत्प्रतिपक्ष of each other, the judgment is impeded because the two हेतुs give rise to distinct परामर्शs leading to quite contrary conclusions. It is needless perhaps to point out that a सत्प्रतिपक्ष हेतु is such, only so long as it is of equal weight with its contrary (तुल्यबलयोरेव सत्प्रतिप्रक्षत्वं नातुल्यबलयोरिति नियमः). As soon as the प्रतिपक्ष becomes stronger by any reason, the former ceases to be a सत्प्रतिपक्ष, and becomes a बाधित. Thus if there are two arguments, one in harmony with the *Śruti* or any other आप्तवाक्य, and the other opposed to it, the other one is बाधित on account of the greater weight of the former.

SECT. LVI. असिद्धः

Futile reason is of three sorts: having non-existent subject, nonexistent reason, and non-existent concomitance. Non-existent subject is thus:–Skyey lotus is fragrant because it is a lotus like a lotus in a lake. Here skyey lotus is the subject, but it does not exist at all. A Non-existent reason is this :— Sound is a quality because it is ocular. Here Sound is not ocular as it is audible. Non-existent concomitance is one which involves a limitation or condition. Condition is that which pervades the thing to be proved, but is not pervaded by the reason. Pervasion of the thing to be proved means not having absolute negation co-existent with the thing; while non-pervasion by reason means having absolute negation co-existing with the reason. In 'the mountain is smoky because it has fire,' contact with wet fuel is the condition. For instance, wherever there is smoke there is contact of wet fuel. Wherever there is fire, there is no contact of wet fuel; e. g. there is no contact of wet fuel in an iron ball. Thus wet fuel is the condition because it pervades the thing to be proved and is not pervaded by the reason. Fieriness is a futile reason owing to the condition.

Asiddha or Inconclusive reason.

1. The fourth हेत्वाभास is असिद्ध '*inconclusive* or unproved reason,' which *Gotama* calls साध्यसम(similar to साध्य), on account of its being as doubtful as the साध्य.* An असिद्ध हेतु is one that has the दोष called असिद्धि, and असिद्धि is defined by *Udaya-*

* G. S. I, 2, 49.

nâchârya as व्याप्तस्य पक्षधर्मतया प्रमितिः सिद्धिस्तदभावः 'absence of the सिद्धि which consists in the true cognition of the साध्य-व्याप्यहेतु as a property of the पक्ष;' or, briefly speaking, असिद्धि is the non-production of परामर्श. Hence असिद्धि has been defined as any cause, other than a व्यभिचार (which gives rise to सव्यभिचार), which obstructs the knowledge of परामर्श. As परामर्श (व्याप्तिविशिष्टपक्षधर्मताज्ञान) is composed of three elements, corresponding to the three terms of the syllogism, namely व्याप्ति, पक्षता and पक्षधर्मता or हेतुता, the obstruction to the knowledge of परामर्श will be caused by a defect or error in the apprehension of any of its three constituents. Thus an असिद्ध हेतु naturally resolves into three varieties, formed according as the error lies in the knowledge of पक्ष, or of हेतु or of व्याप्ति. The first is called आश्रयासिद्ध, the second स्वरूपासिद्ध, and the third व्याप्यत्वासिद्ध.

First kind of Asiddha.

2. *Annambhatta* only enumerates the three varieties, without defining either असिद्ध in general or its first two varieties. आश्रयासिद्ध is defined as पक्षतावच्छेदकाभाववत्पक्षकः, that is, 'a हेतु the *subject* or *place* of which is devoid of the distinctive character of the supposed पक्ष.' Thus in the example, "A sky-lotus is fragrant, because it is a lotus," the reasoning would be correct if the पक्ष sky-lotus had been a real thing; but being only an imaginary thing, it is devoid of the essence of the supposed पक्ष, namely, गगनीयत्व. Here the पक्ष is not अरविन्द simply, but गगनीयत्वविशिष्ट or गगनीयत्वावच्छिन्न अरविन्द, and hence the पक्षतावच्छेदक or the essence of पक्षता is गगनीयत्व which never exists on an अरविन्द. In this case, being misled by the metaphorical application of the word अरविन्द to गगनारविन्द we attribute the qualities of a real lotus to a fictitious thing, the existence of which is quite hypothetical or unproved. Here the पक्षतावच्छेदकधर्म is गगनीयत्व, because it distinguishes गगनारविन्द, the पक्ष in this case, from other lotuses; and as अरविन्द itself is a real thing, the falsity of गगनारविन्द must be due to the non-existence of its अवच्छेदक, the गगनीयत्व, according to the maxim, when a property predicated of a *qualified* thing (विशिष्ट) cannot reside in the *qualified* (विशेष्य), it is attributed to the *qualification* (सति विशेष्ये बाधे विशिष्टा बुद्धिर्विशेषणमुपसंक्रामति). In the present instance there is on the पक्ष the

non-existence of the पक्षतावच्छेदकधर्म, that is, गगनीयत्व. An आश्रय or पक्ष however may be असिद्ध in two ways, either by being altogether non-existent, as in the above example, or by wanting the character of पक्षता, that is, सिषाधयिषाविरह etc. Take, for example, शरीरं हस्तादिमत्, हस्तादिमत्तयाप्रतीयमानत्वात्. Here the हेतु being identical with the साध्य (हस्तादिमत्त्व), the argument is mere सिद्धसाधन, 'proving what is already proved.' As there is no सिद्ध्यभाव here, the पक्ष is wanting in the essential character of पक्षता, and is therefore असिद्ध. Hence T. D. remarks under the next section that according to ancients सिद्धसाधन comes under आश्रयासिद्ध, while moderns regard it as a separate निग्रहस्थान and not a fallacy.

3. The second variety स्वरूपासिद्ध *non-existence*, is so called, because in it the हेतु itself is असिद्ध, *i. e.* non-existent on the पक्ष; as in the example given in the text, the हेतु चाक्षुषत्व does not exist on शब्द. Other examples of स्वरूपासिद्ध are ह्रदो वह्निमान् धूमात्, घटः पृथिवी पटत्वात्, सामान्यमनित्यं कृतकत्वात्, or शशादिरश्वो विषाणित्वात्, in all of which it will be marked that the हेतु is non-existent on the पक्ष. It differs from आश्रयासिद्ध in this, that in the latter the आश्रय is either false or not a proper पक्ष, while in the former, both हेतु and आश्रय may be real things but there is no connection between them, or rather the negation of हेतु, and not the हेतु, resides in the पक्ष. स्वरूपासिद्ध has many sub-varieties, such as शुद्धासिद्ध, भागासिद्ध, विशेषणासिद्ध and विशेष्यासिद्ध, all of which ultimately resolve into the general characteristic that the हेतु, as it is taken, is non-existent on the पक्ष. In this respect स्वरूपासिद्ध may be said to be complimentary to सव्यभिचार, सत्प्रतिपक्ष and बाधित. The three varieties of सव्यभिचार, as has been already shown, turn on the existence or the non-existence of two of the five requisites of a सद्धेतु, namely सपक्षसत्त्व and विपक्षव्यावृत्ति; while सत्प्रतिपक्ष and बाधित are due to the neglect of the last two requisites. स्वरूपासिद्ध is due to the absence of the first and the most important requisite, namely पक्षधर्मत्व. Not that the हेतु is unreal or non-existent in itself, but that it lacks the

The second kind.

essential character of हेतुता, namely पक्षधर्मता. The real definition of a स्वरूपासिद्ध therefore is हेतोः पक्षावृत्तित्वम्.

The third kind

4. व्याप्यत्वासिद्ध, *non-existent concomitance* or *improper limitation*, is defined by *Annambhatta* as 'a *mark* which has a (suppressed) *condition* (उपाधि), that is, which is true conditionally only. T. K. and the older writers generally define it as साध्यव्याप्यतावच्छेदकरहितो हेतुः 'a *mark* which is devoid of the distinguishing attribute that is necessary to make it साध्यव्याप्य. When the हेतु, in the form in which it is given, is not known to be *invariably* accompanied by the साध्य, it is not साध्यव्याप्य, that is, its व्याप्यत्व is असिद्ध or doubtful. Such a हेतु is wanting in the proper व्याप्यतावच्छेदकधर्म, either by excess when it is too generally stated, or by defect when it is unnecessarily restricted by a limitation that might be totally false or superfluous. Any way the हेतु is different from what it ought to be, and its साध्यव्याप्यत्व is therefore questionable. A स्वरूपासिद्ध हेतु does not exist on the पक्ष; while a व्याप्यत्वासिद्ध is not *invariably* associated with साध्य. In one the पक्षधर्मता is vitiated ; in the other the व्याप्ति is faulty. The stock example is पर्वतो वह्निमान् काञ्चनमयधूमात्, 'the mountain is fiery because it has golden smoke.' Here although mere धूम is वह्निव्याप्य, काञ्चनमयधूम is not, for the additional epithet makes it a different thing which is not invariably associated with fire. In this example the व्याप्यत्वावच्छेदक धर्म is not mere धूमत्व but काञ्चनमयधूमत्व or rather काञ्चनमयत्व, which does not exist on the हेतु ; and hence धूम is व्याप्यत्वासिद्ध.

Difference between ancients and moderns.

5. So far there is not much difference of opinion, but ancients and moderns are as usual divided as to the exact scope of this fallacy. In the above example, the epithet काञ्चनमय is not only superfluous, but makes the हेतु unreal. Suppose however we have पर्वतो वह्निमान् नीलधूमात्. Here although the adjective नील is superfluous, it does not make the हेतु actually false, and the argument will in spite of it be valid. Hence

the moderns do not regard it as a case of हेत्वाभास, but only a fault of language, called अधिक (tautology). The ancients however include the case under व्याप्यत्वासिद्ध, because नीलत्व, being a needless limitation of धूम, is as misleading as काञ्चनमयत्व, and cannot therefore be the proper व्याप्यतावच्छेदक धर्म. The reason why this is regarded as व्याप्यत्वासिद्ध fallacy by the ancients appears to be that the addition of the qualification नीलत्व conveys by implication that unqualified धूम is not वह्निव्याप्य, and that it is the limitation नीलवत्त्व that brings it within the pale of the व्याप्ति. नीलत्व thus becomes व्याप्यताच्छेदक which it really is not.

Non-concomitance is of two kinds.

6. Now this असिद्धि of व्याप्ति may occur in two ways, either when the concomitance is not proved owing to its non-observance in any other place, or when it is actually proved to be false owing to the presence of some उपाधि or *condition.* Accordingly there are two varieties of व्याप्यत्वासिद्ध, (1) साध्येनासहचरितः 'not concomitant with साध्य;' and (2) सोपाधिकसाध्यसंबन्धः 'concomitant with साध्य only conditionally.' The instance of the first is शब्दः क्षणिकः सत्त्वात् । यत्सत्तत्क्षणिकं यथा घनः, where the invariable concomitance of सत्त्व and क्षणिकत्व is not proved. The cases of काञ्चनमयधूम and नीलधूम would also apparently come under this class, because there too the व्याप्ति is not proved. The other variety is that of a *conditional* व्याप्ति and is ordinarily known as सोपाधिक हेतु. The familiar example of a सोपाधिक is पर्वतो धूमवान् वह्नेः, where वह्नि is not धूमव्याप्य absolutely, but becomes so only when we add the condition आर्द्रेन्धनसंयोगे सति; that is, fire in general is not invariably accompanied by smoke, but fire in contact with wet fuel is. Hence the हेतु in this case, namely वह्नि, is made साध्यव्याप्य only when we add to it the limitation आर्द्रेन्धनसंयोगवान्. The हेतु is too widely stated and requires to be restricted to make the व्याप्ति true. In one sense this case is the converse of काञ्चनमयधूम. In that case the fallacy consisted in the addition of an unnecessary restriction, while in this, it consists in the omission of a necessary one. In both cases, however,

the व्याप्यतावच्छेदक is equally false, and hence the general definition of a व्याप्यत्वासिद्ध applies to both.

7. After having comprehended what व्याप्यत्वासिद्ध really is, the student will be in a position to understand and correctly estimate *Annambhatta's* statement that a सोपाधिक हेतु is व्याप्यत्वासिद्ध. There is a difference of opinion as to the true meaning of this statement. S. C. takes it as a definition of व्याप्यत्वासिद्ध, but it will be seen from what has been said above that सोपाधिक can properly be a definition of only one kind of व्याप्यत्वासिद्ध, and does not at all apply to instances like काञ्चनमयधूम. On the other hand *Nîlakantha* seems to take the statement not as a definition, but as a reply to those who class सोपाधिक as a separate हेत्वाभास. The interpretation of *Nîlakantha* would undoubtedly be preferable, as it saves the author from a palpable error; but there is against it the unequivocal statement of T. D.—व्याप्यत्वासिद्धस्य लक्षणमाह सोपाधिक इति. We have no choice therefore but to agree with S. C. in taking the sentence as a definition. There are only two suppositions on which *Annambhatta's* definition can be reconciled with the general doctrine of व्याप्यत्वासिद्ध. Either he included instances like काञ्चनमयधूमात् and शब्दः क्षणिकः सत्त्वात् under सोपाधिक itself, or he relegated them to some other head of हेत्वाभास. Both suppositions are plausible and may be partly true. In the inference, for example, शब्दः क्षणिकः सत्त्वात् we can conceive of an उपाधि such as उत्पत्तिमत्त्वे सति, or ध्वंसप्रतियोगित्वे सति, so that ether and other eternal things may not be क्षणिक simply because they exist. Thus the हेतु सत्त्व will be सोपाधिक. Similarly we might regard काञ्चनमयधूमात् as an instance of स्वरूपासिद्ध, since, there being no such thing as काञ्चनमयधूम in the world, the हेतु is non-existent on the पक्ष. In this manner we can perhaps justify *Annambhatta's* definition; but the fact that it is inconsistent with the express views of other eminent authorities such as *Gangeśa*, *Raghunâtha*, and *Viśvanâtha* is undeniable. On the other hand there is a distinct school of writers who exclude even the सोपाधिक

Annambhatta's definition.

proper from the class of असिद्ध हेतु, and put it under सव्यभिचार; and their reasoning is very plausible. उपाधि, they say, vitiates व्याप्ति, which in its turn destroys परामर्श. उपाधि is therefore not a direct cause of अनुमितिप्रतिबंध. उपाधि produces व्यभिचार of व्याप्ति, and that व्यभिचार obstructs the अनुमिति. उपाधि therefore being अन्यथासिद्ध is not itself a हेतुदोष, the real दोष in all the सोपाधिक हेतुs being the व्यभिचार which springs from उपाधि. Hence सोपाधिक is in fact only a species of सव्यभिचार. The difference between this view and the generally accepted opinion is that the former includes the सोपाधिक under सव्यभिचार because there is the व्यभिचार, while the latter includes it under व्याप्यत्वासिद्ध because there is the असिद्धि of व्याप्ति.

Asiddhi distinguished from Vyabhichâra.

8. A question here arises as to what distinction can be made between व्यभिचार and असिद्धि of व्याप्ति? The distinction is important, because it is that on which the difference between a व्याप्यत्वासिद्ध and a साधारण सव्यभिचार depends. Apparently the two are identical, because both of them denote the break of the *invariable concomitance* of साध्य and हेतु. The distinction is rather nicely drawn, but it is real. It is that व्यभिचार is positive while व्याप्यत्वासिद्धि is negative. व्यभिचार is the cause which actually disturbs the *invariable concomitance*; असिद्धि is only the absence of that *concomitance*. व्यभिचार is the *certainty* that the व्याप्ति is false, असिद्धि is the uncertainty that it is real. व्यभिचार is therefore stronger and more palpable, while असिद्धि occurs more frequently in practice and is not easily detected. Instances often occur in which we strongly suspect that the generalization is imperfect, but we cannot positively say why it is so. The example शब्दः क्षणिकः सत्त्वात् is of this kind, for we can neither say that क्षणिकत्व and सत्त्व are associated, nor that they are not. To take a common instance, both gravity and elasticity being common properties of all matter are found invariably associated with each other; and yet we cannot say that

one is व्याप्य of the other. The concluding remark of N. B., where this distinction is expressed in a peculiarly technical language, though somewhat obscure, amonnts to the same thing. T.D.'s *dictum* that in साधारण there is an अव्यभिचाराभाव, *i. e.* व्यभिचार, while in व्याप्यत्वासिद्ध there is विशिष्टव्याप्त्यभाव, is really the same distinction expressed in a slightly different way. In साधारण we are assured of the non-existence of व्यभिचाराभाव, *i. e.* of the actual existence of व्यभिचार, while in असिद्ध we are certain only of the non-existence of व्याप्ति, but cannot positively say whether there is an actually व्यभिचरित व्याप्ति.

9. व्याप्यत्वासिद्ध has been defined as सोपाधिक, but the meaning of the latter phrase cannot be understood unless we know what an उपाधि is. सोपाधिक is a हेतु that is true *conditionally*; but what is a *condition* ? Etymologically the word उपाधि is interpreted by *Udayanâchârya* as उप समीपवर्तिनि आदधाति संक्रामयति स्वीयं धर्ममित्युपाधिः. It is a thing which imparts its own property to another object placed in its vicinity, as a red flower which makes the crystal placed over it look like a ruby by imparting to it its own redness, not really but seemingly. The flower is therefore the उपाधि. Similarly the all-pervading *Âkâśa* appears to have dimensions and form when circumscribed in a jar, because the परिमितत्व of its उपाधि the घट is for the time being imparted to it. उपाधि is therefore the *condition* or the surrounding circumstances, individually and collectively, which give a thing its distinctive character for the time being, and make it look as it appears to us. Although therefore a thing may generally belong to a class, its specific character by which we usually distinguish the thing from other species or individuals of the same class is given to it by its उपाधि.. Thus though smoke may be generally said to be produced from fire, the specific and immediate cause of its production is the presence of wet fuel, for it is wet fuel that, when ignited, invariably gives out smoke. There is therefore an *invariable concomitance* (व्याप्ति) between wet fuel and smoke, for the smoke

Upâdhi

being the immediate effect of wet fuel, cannot exist without its cause, the wet fuel. In other words धूम is आर्द्रेन्धनसंयोगव्याप्य, and आर्द्रेन्धनसंयोग is the व्यापक of धूम. It is not however a general rule that wet fuel exists wherever there is fire, for fire may exist on dry fuel or without any fuel at all, as in a red-hot iron ball. Therefore आर्द्रेन्धनसंयोग is not the व्यापक of वह्नि. Thus आर्द्रेन्धनसंयोग, which is the उपाधि of धूम, that is, the invariable *condition* on which the production of smoke depends, may be described as धूमव्यापकत्वे सति वह्न्यव्यापकः, that is, it is more extensive than धूम and less extensive than वह्नि. It is intermediate between the two, and is in fact the difference by which the range of धूम is smaller than the range of वह्नि. If we take the figure on p. 286 it will correspond to the gnomen EKG, which added to the smaller square of smoke makes the larger one representing fire. When therefore we reason पर्वतो धूमवान् वह्नेः, this उपाधि invariable checks us. For if this syllogism is valid, धूम being the साध्य must be the व्यापक of the हेतु वह्नि. But आर्द्रेन्धनसंयोग is already shown to be the व्यापक of धूम; *a fortiori* आर्द्रेन्धनसंयोग, must be the व्यापक of वह्नि. It is however shown to be the अव्यापक of वह्नि. The same thing thus becomes both व्यापक and अव्यापक of वह्नि, which is absurd. Hence the inference पर्वतो धूमवान् वह्नेः cannot be valid, that is, the हेतु वह्नि is not a सद्धेतु but a हेत्वाभास.

We can deduce the same conclusion by direct reasoning. आर्द्रेन्धनसंयोग is the व्यापक of धूम and वह्नि is the व्यापक of the संयोग. *A fortiori* वह्नि is always the व्यापक of धूम, and can never be a proper हेतु for inferring the धूम, since a हेतु must be always the व्याप्य of its साध्य. A syllogism therefore, having धूम for its साध्य, and वह्नि for its हेतु or साधन is rendered invalid on account of the presence of the उपाधि, *i. e.* आर्द्रेन्धनसंयोग, which being धूमाव्यापक and वह्न्यव्यापक may by expressed by the general formula, साध्यव्यापकत्वे सति साधनाव्यापकः. This is in fact the definition of उपाधि given by *Annambhaṭṭa*, a definition which he has borrowed from *Udayanâchârya*. In a valid syllogism, such as पर्वतो वह्निमान् धूमात्, there is no such उपाधि

because there वह्नि and धूम being साध्य and साधन respectively आर्द्रेन्धनसंयोग is not साध्यव्यापक and साधनाव्यापक. The definitions of साध्यव्यापकत्व and साधनाव्यापकत्व given in the text are easily understood. The first is the quality of never being the प्रतियोगि of any *absolute negation* co-existing with the साध्य, or more shortly, the property of never being absent where the साध्य is present. The second of course is just the opposite of this.

Four kinds of Upâdhi.

10. T. D. notices four kinds of उपाधिः—(1) that which covers the साध्य *absolutely*, that is, universally; (2) that which covers it only in that form in which it exists on the पक्ष; (3) that which covers it only when it is associated with साधन; and lastly (4) that which exists in the साध्य independently. आर्द्रेन्धनसंयोग is an instance of the first kind, because it co-exists with smoke everywhere. An instance of the second kind is उद्भूतरूपवत्त्व (manifested colour) in the inference वायुः प्रत्यक्षः प्रत्यक्षस्पर्शाश्रयत्वात्, because प्रत्यक्षस्पर्शाश्रयत्व co-exists with प्रत्यक्षत्व only when it is accompanied by उद्भूतरूपवत्त्व. But this उद्भूतरूपवत्त्व is not a necessary condition for प्रत्यक्षत्व of all kinds since it does not exist in मानसप्रत्यक्ष. उद्भूतरूपवत्त्व is necessary for only that kind of प्रत्यक्ष which is possible in the case of a thing like air, that is, the प्रत्यक्ष of external objects. Hence उद्भूतरूपवत्त्व is an उपाधि for बहिर्द्रव्यप्रत्यक्षत्व only, that is, प्रत्यक्षत्व as limited by a property (बहिर्द्रव्यत्व) residing in the पक्ष, *viz.* वायु.

The third is still more complex. In the instance ध्वंसो विनाशी जन्यत्वात्, भावत्व is the उपाधि because the व्याप्ति, यद्यज्जन्यं तत्तद्विनाशि is true of भाव things only, and requires to be limited by the qualification भावत्वे सति. भावत्व is a necessary condition for a thing being अनित्य, only when the thing is a product, since प्रागभाव though not a भाववस्तु is both अजन्य and अनित्य. भावत्व is therefore the उपाधि of the अनित्यत्व of products, not of non-products, that is, it is जन्यत्वावच्छिन्नानित्यत्वव्यापक. But in the above instance जन्यत्व being the साधन, and अनित्यत्व the साध्य, भावत्व is साधनावच्छिन्नसाध्यव्यापक. *Nilakantha* here reads प्रागभावो विनाशी जन्यत्वात्, thus making

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प्रागभाव instead of ध्वंस the पक्ष of the syllogism, and adds the remark अत्र जन्यत्वं पक्षधर्मो न संभवतीति साधनावच्छिन्नसाध्यव्यापकत्व-घटितलक्षणम्. But this appears to be wrong, for the syllogism, as put by *Nîlakantha*, will be an instance of स्वरूपासिद्ध where हेतु does not exist on the पक्ष, and not of सोपाधिक or व्याप्यत्वासिद्ध. The appended comment is also incorrect, because the उपाधि here is साधनावच्छिन्नसाध्यव्यापक not because जन्यत्व is not a पक्षधर्म, but because the उपाधि itself cannot be a पक्षधर्म. Another instance of this kind of उपाधि is गर्भस्थो मित्रातनयः श्यामः, मित्रातनयत्वात्, मित्रातनयवत् 'the unborn son of the woman named *Mitrâ* is dark-coloured, because he is a son of *Mitrâ*, like his elder brothers. Here शाकपाकजत्व is an उपाधि because the dark colour is found only in those sons of *Mitrâ* who were born when their mother had eaten only vegetables and not ghee. Other sons of *Mitrâ* born after eating ghee are not dark-coloured, while eating of vegetables is not known to produce dark colour anywhere except in *Mitrâ*'s sons.

The fourth kind of उपाधि is प्रागभावो विनाशी प्रमेयत्वात्, where भावत्व is उपाधि because only those knowable things that are भावरूप (and not अत्यन्ताभाव) are destructible. But again भावत्व is a condition for अनित्यत्व only when the thing is a product; that is, it is the उपाधि of जन्यत्वावच्छिन्नानित्यत्व, where जन्यत्व being neither the साधन nor a पक्षधर्म is an उदासीनधर्म. Hence in this case the उपाधि is उदासीनधर्मावच्छिन्न.*

SECT. LVII. बाधितः

A reason is false where the negation of the thing to be proved is established by another proof, e. g. fire is cold as it is substance. Here coldness is the thing to be proved, and its negation is hotness which is cognized by touch-perception. Hence it is futile.

Absurd or Contradicted reason.

1. The special characteristic of बाधित has been already explained in distinguishing it from सत्प्रतिपक्ष.† *Annambhaṭṭa* defines it as 'a हेतु designed to prove a साध्य, the negation of which is

* For a fuller explanation of the doctrine of उपाधि see B. P. 137-9 and S.M. *loc. cit.* calc. ed. pp. 123-5. See also Appendix A to this edition.

† See Note under Sec. 54 p. 307 *Supra.*

ascertained by another and presumably a more authoritative proof;' for if the other proof is not stronger, it will not prevail and the first हेतु will not be बाधित or contradicted. *Annambhatta's* definition of बाधित is in conformity with the opinion of the ancient school that the knowledge of the साध्याभाव obtained by the other proof must be a certain and right knowledge (प्रमात्मक). *Raghunâtha Śiromaṇi* and other moderns, however, think that it need not be प्रमात्मक. *Gangeśa's* definition प्रमितसाध्याभाववत्पक्षको बाधितः, of which *Annambhaṭṭa's* definition is only a paraphrase, is simple and tolerably correct; but it requires one important qualification, *viz.* अनवच्छिन्न, in order to prevent it from applying in the case of an अव्याप्यवृत्ति धर्म. Thus when we say कपिसंयोगवानयं वृक्षः, the same पक्ष वृक्ष will have the साध्य *i. e.* संयोग in one part (शाखावच्छेदेन), and संयोगाभाव in another part (मूलावच्छेदेन); and yet the inference will not be बाधित. It is therefore declared that in बाधित the ascertainment of साध्याभाव must be with respect to the whole पक्ष, and not a part of it only. The complete definition therefore is पक्षनिष्ठानवच्छिन्नसाध्याभाववान्. The varieties of this बाधित are enumerated, according as the thing apprehended by the other proof is पक्ष, or साध्यप्रतियोगि, or हेतु, and according as the other proof is प्रत्यक्ष, अनुमान, उपमान, or शब्द.*

Correct reading

2. It may be remarked by the by that there exists much confusion as to the correct reading of स्पार्शनप्रत्यक्षेण, among different copies and commentators, probably owing to the doubt whether there can be a स्पार्शनप्रत्यक्ष of उष्णत्व; but there ought to be no reasonable doubt on the point after what has been already said as to the perception of qualities.†

A classification of the fallacies.

3. The five "fallacious reasons" having been explained, we may now take a brief survey of all of them together, in order to understand, if possible, what general principle underlies the classification given in the text, and with what limita-

* Bhîmâchârya : *Nyâya-kośa*, 2nd ed. p. 554.

† See Note 2 under Sec. 43 p. 222 *Supra*.

tions it is to be accepted. In the first place, even a cursory glance will show that the five हेत्वाभासs do not exhaust all the kinds of fallacies that are liable to be committed in the course of reasoning. They are professedly हेत्वाभासs only, that is, fallacies of the हेतु or *middle term* of the syllogism. But our daily experience shows that the other terms, the *major* and the *minor* are equally capable of hiding fallacies of their own, even though the *middle* be faultless. The two *Illicit Processes* of *major* and *minor* in English logic are distinctly fallacies of this latter kind. Again there are other fallacies which are as it were extra-logical, and which cannot be said to belong to particular terms, either because a premise is false in fact though correct in form, as in a *Petitio Principii*, or because the argument is totally irrelevant, as in an *Ignoratio Elenchi*. What place is provided for these in Sanskrit logic? Or is it that they were not regarded as fallacies in India? The latter case is certainly not posible, for an argument once invalid is invalid wherever you go. So that either these fallacies must be included in some one or other of the five classes of हेत्वाभास mentioned above, or that there must be a separate group or groups of fallacies not alluded to by *Annambhaṭṭa*. A perusal of the standard works on *Nyâya* shows that both surmises are partially true. Like the हेत्वाभासs some writers treat of other kinds of आभासs also, such as a पक्षाभास and a दृष्टान्ताभास, which are as much fallacies as the हेत्वाभासs, and many of which have their exact equivalents in English logic. And that is just as it should be, for if the हेतु is liable to be mis-conceived and mis-stated, so are the पक्ष, the साध्य and the दृष्टान्त. Many of these आभासs and especially those of दृष्टान्त are enumerated in old works.* Again *Gotama* mentions numerous fallacies of argument under the two heads of जाति and निग्रहस्थान, of which the हेत्वाभासs form only a subdivision. Apart from these there are found in practice many

* See for instances of these *Nyâya-Bindu Tîkâ*, Bibl. Ind p. 91 *et. seq.*

complex cases of bad reasoning such as अन्योन्याश्रय, अनवस्था and चक्रक. Strictly speaking therefore the so-called हेत्वाभास mentioned in *Nyâya* manuals form only a part of the possible fallacies.

All fallacies reducible to hetvâbhâsas

4. A little consideration however will show that all the varieties of आभास can be reduced to a हेत्वाभास. A fallacy, in whatever part of the syllogism it may lie, can by stating the syllogism in a logical form be reduced to some improper use of the *middle term* in one or both the premises. The *middle term*, being the link which connects the subject and the predicate of the conclusion, determines in fact the character of the whole syllogism; and so if the latter is invalid the invalidity must in one way or another arise from some defect in the connecting link. Not that other parts of the syllogism may not be faulty, but the faults can, by re-stating the syllogism in a suitable form, be transferred to the *middle term*. This is rendered much easier in the Sanskrit syllogism than in the English, owing to the peculiar form of the former. The chief thing required for a valid अनुमिति in Sanskrit is a correct परामर्श; and a परामर्श, which is composed of three constituent elements, पक्षता, पक्षधर्मता and व्याप्ति, is correct only when its three components are faultless. Hence all the faults of a syllogism must belong to some one of these three things. When the fault lies in the पक्षधर्मता or हेतुता, it is of course a हेत्वाभास proper. The fault lies in पक्षता only when the पक्ष or minor term is a totally unreal thing, such as गगनारविन्द, or when it is a thing on which the हेतु does not reside. Either way the हेतु or middle term cannot be predicated of the minor, and the two cases fall under आश्रयासिद्ध and स्वरूपासिद्ध respectively. A third case occurs in English logic, namely that of *Illicit Process of minor* in which the term is undistributed in the premise, though distributed in the conclusion. But this case is not possible in the Sanskrit syllogism, because there, as has been already pointed out,* the पक्ष or *minor* term is

* See Note on p. 274, *Supra.*

always universal. The minor premise, *i. e.* the हेतुवाक्य, being always in the universal affirmative, the minor term is never undistributed in the premise. Lastly when the fault lies in the व्याप्ति, it can always be traced to a व्यभिचरित or a सोपाधिक हेतु.

Fallacies in European Logic.

5. Leaving aside all material or non-Logical fallacies which are ultimately reducible to some fault in the व्याप्ति, the strictly Logical or formal fallacies recognized by European logicians fall under four heads, 1. *Undistributed middle*, 2. the two *Illicit Processes* (of *major* and *minor*), 3. Negative premises for affirmative conclusion and *vice versa*, and 4. four or more terms*. Now the first of these expressly pertains to the middle term, while the *Illicit Processes* have been shown to be impossible in Sanskrit. The *Illicit major* is impossible, because if the *major* term is to be distributed in the conclusion, the conclusion must be negative; but a negative conclusion is inadmissible in *Nyâya logic*. An *Illicit Minor* would require an undistributed *minor* term in the premise which is also impossible in Sanskrit. The other two kinds are resolvable into *Ambiguous Middle*. All the Semi-Logical fallacies also come under *Ambiguous Middle*. So all possible fallacies are reduced to three classes, non-logical fallacies coming under व्याप्तिदोष, the *Undistributed Middle* and the *Ambiguous Middle*. Of these the *Undistributed Middle* is not possible in Sanskrit, as the व्याप्तिवाक्य which corresponds to the *major* premise is always in the form of a universal proposition, and must have a universal middle for its subject. But more of this later. The *Ambiguous Middle* is nothing more than an असिद्ध or अप्रसिद्ध हेतु. Thus we see that all fallacies are ultimately reducible to some defect in the हेतु or middle term. The same can be shown to hold good in the English syllogism if all the moods are reduced to the only valid and proper mood, *Barbara*.

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* Whately: *Elements of Logic*, Bk. III, § 2.

6. Now let us consider the fallacies mentioned in the older works on *Nyâya*, which do not apparently belong to the हेतु. The twenty-four जातिs mentioned by *Gotama** are nothing more than arguments based on false analogy or false distinction, and can be easily reduced to हेत्वाभास. Of the twenty-two निग्रहस्थानs or points where an adversary can be caught or defeated, some like अर्थान्तर, पुनरुक्त and निरर्थक are merely tricks usually resorted to by a disputant in order to confound his rival, and which his rival is therefore taught to expose at once. Others like अविज्ञातार्थ, अननुभाषण, अप्रतिभा and पर्यनुयोज्योपेक्षण are only possible in long-continued controversies, and have nothing to do with the syllogism. They are dialectical lapses rather than fallacies of a particular argument, and belong therefore to the province of Rhetoric, not Logic. Only seven of these twenty-two 'catching points,' viz. प्रतिज्ञाहानि, प्रतिज्ञान्तर, प्रतिज्ञाविरोध, प्रतिज्ञासंन्यास, हेत्वन्तर, अपसिद्धान्त and हेत्वाभास, can have any pretentions to be called logical fallacies. Of these the first four and the last but one are manifestly cases where the disputant is inconsistent with himself, and his conclusion does not therefore follow from his premises. हेत्वन्तर occurs where he employs one हेतु in हेतुवाक्य and another in the व्याप्ति. All these are cases of व्यभिचरित हेतु. The fallacies proper are therefore included in the last निग्रहस्थान, named हेत्वाभास. Similarly it can be shown that there can be no पक्षाभास or व्याप्त्याभास or दृष्टान्ताभास apart from the हेत्वाभास. पक्षाभास or a misleading minor falls under आश्रयासिद्ध. व्याप्त्याभास or false generalization is nothing but a व्यभिचरित or असिद्ध व्याप्ति, and is included in अनैकान्तिक or व्याप्यत्वासिद्ध हेत्वाभास. दृष्टान्ताभास also falls under the same, as it is not a दोष in itself, but acts by vitiating the व्याप्ति. If we say नित्यः शब्दोऽमूर्तत्वात् घटवत्, the example घट is a दृष्टान्ताभास, because neither साध्य nor साधन exists on घट. Again, if we say रागादिमानयं पुरुषो मरणधर्मत्वाद्रथ्यापुरुषवत्, the रथ्यापुरुष is a दृष्टान्ताभास because रागादिमत्त्व being doubtful in the man pass-

Fallacies mentioned in old works.

* G. S, V, I, 1 ; and T. D. p. 64.

ing in the street, the दृष्टान्त is not निश्चितसाध्यवान्. All such cases of false or doubtful instances give rise to व्यभिचरितव्याप्ति and go under अनैकान्तिक or असिद्ध. There are some miscellaneous fallacies such as साधनाप्रसिद्धि, साध्याप्रसिद्धि etc. which are असिद्ध हेतुs under different names. Lastly the complex fallacies known as अन्योन्याश्रय, अनवस्था and चक्रक are only series of two or more invalid syllogisms. In this way the five हेत्वाभासs named in the text can be shown to include all the possible cases of fallacious arguments.

The advantage of the five-fold classification.

7. The narrowing down of the circle of fallacies to the single head of हेतुदोष has the great advantage of facilitating their detection. In the English syllogism you have first to examine all the three terms separately, then the form of each premise, and then the material truth of the major premise. In Sanskrit you have only to look to a single term, namely the हेतु, and see whether it possesses all the five requisites of a good हेतु. If it lacks any one of them you can at once pronounce that the argument is invalid. Then find out which requisite is wanting. If पक्षधर्मत्व is absent, the fallacy is either आश्रयासिद्ध or स्वरूपासिद्ध. If सपक्षसत्त्व is wanting, it is असाधारण or अनुपसंहारि. If विपक्षव्यावृत्ति is not found, it is साधारणानैकान्तिक or व्याप्यत्वासिद्ध. In विरुद्ध the व्याप्ति is just the opposite of that assumed, and hence you will find both सपक्षसत्त्व and विपक्षव्यावृत्ति not only absent, but actually reversed, that is, you will find सपक्षव्यावृत्ति and विपक्षसत्त्व. The last two हेत्वाभासs are only special cases of false or imperfect generalization. Of these varieties the two that are most insidious and occur most frequently in practice are साधारण and व्याप्यत्वासिद्ध; and as these are caused by incorrect generalization, you have only to state the व्याप्ति in the form already provided यद्यत् तत्तत् or यत्र यत्र—तत्र तत्र, and then see whether the व्याप्ति as stated is warranted by experience. If it is not, it is व्यभिचरित and the syllogism is invalid. In the Aristotelian syllogism the multiplication of

figures and moods only breeds confusion and makes the detection of fallacies often difficult. The *Naiyâyikas*, profiting by the vast resources of the Sanskrit language, have considerably minimized this difficulty by providing a single form of syllogism which is both the simplest and the most elastic at the same time. It is capable of conveying even the most complex ideas in the fewest words possible. For example nothing is more difficult in English than to *obvert* a proposition, that is, to change an affirmative into negative and *vice versa* ; and yet in Sanskrit you can do this at once by simply adding अभाव to the word. This has enabled the *Naiyâyikas* to dispense with all negative moods and thus reduce the syllogism to the single form *Barbara.** They have thereby avoided all fallacies arising from non-distribution of terms. In this way they have narrowed the circle of *formal* fallacies to the single case of 'ambiguous' middle,' and reduced all *material* fallacies to a व्यभिचरित or असिद्ध व्याप्ति.

Conversion of Naiyâyika and Aristotelian syllogisms.

8. It is a useful exercise to convert the Aristotelian and the Sanskrit syllogisms into each other. They have each their special characteristics, and allowance must be made for them before an English syllogism is converted into Sanskrit or *vice versa.* The principal rule of conversion is, always reduce an English syllogism to the form *Barbara* before converting it into Sanskrit, and that conversely when a Sanskrit न्याय is to be put into an English garb, make such modifications as are necessary to put it in the most natural form sanctioned by the rules of English logic. In a valid argument the rule may be sometimes ignored without much inconvenience, but when the argument is fallacious, its neglect is likely to mislead the student by making the detection of fallacies difficult. The most striking difference between English and Sanskrit logic is the absence in the latter of any distinction corresponding to the *formal* and *material* fallacies, or as Aristotle

* Vide Note p. 274, *Supra.*

termed them, fallacies *in dictione* (in form) and those *extra dictionem* (outside-form). The reason of this has been already explained. The form of the Sanskrit syllogism is so strict and circumscribed that an argument put into it is at once reduced to a mere mathematical equation. The chance of any fallacy lurking in words is therefore reduced to a minimum. Whately divides the *formal* fallacies into two groups, one of purely logical, comprising the two *Illicit processes* and the *Undistributed middle*, and the other of *Ambiguous middle*, called semi-logical. We have seen that fallacies of the first group are totally absent in Sanskrit since they are strictly formal. The *semi-formal* or semi-logical fallacy of ambiguous middle is found, exactly because it is partly material ; and even that, when stated in Sanskrit, assumes the character of a material fallacy, namely सोपाधिकहेतु. The ambiguity of the middle term becomes the उपाधि in Sanskrit, and when once that उपाधि is ascertained, we immediately know that the व्याप्ति is व्यभिचरित, which is a material fallacy. Not that no *formal* fallacies are possible in Sanskrit. There are some of them of the kind known in English as the fallacy of four terms or paronymous terms ; but when analysed they are reduced to either स्वरूपासिद्ध or व्याप्यत्वासिद्ध.

9. Now we shall illustrate our remarks by a few examples:–

Examples of English syllogisms

I. Take, an *Illicit Process of Major*:

Whatever is universally believed is true ;
God's existence is not universally believed;
∴ It is not true.

Or stated more simply:—

All universally-believed things are true ;
God's existence is not a universally-believed thing ;
∴ God's existence is not true.

This is an invalid mood (A E E) of the first figure and the major term 'true' is distributed in the conclusion but un-

distributed in the premise. As we must have all affirmative propositions in Sanskrit, obvert the minor premise and the conclusion in the above ; so we have:—

All universally believed things are true;
God's existence is a not-universally-believed thing;
∴ God's existence is a not-true (untrue) thing.

Translated into Sanskrit this will run :—

ईश्वरसत्त्वमप्रमाणम् ।
असर्वपरिग्रहीतत्वात् or सर्वपरिग्रहीतत्वाभावात् ।
यत्र यत्र सर्वपरिग्रहीतत्वं तत्र प्रमाणत्वम् यथा घटादौ ।

Here it will be seen that the व्याप्ति is not proper because the two terms in it do not correspond to हेतु and साध्य. But the general proposition is true ; hence its correct व्यतिरेक will be यत्र यत्राप्रमाणत्वं तत्र तत्र सर्वपरिग्रहीतत्वाभावः; that is, अ-प्रमाणत्व which is the साध्य in the syllogism here is सर्वपरिग्रही-तत्वाभावव्याप्य *i. e.* साधनव्याप्य. Thus the हेतु in this syllogism is the व्यापक of साध्य and not साध्यव्याप्य, as it always is in a valid syllogism ; hence it is सोपाधिक or व्याप्यत्वासिद्ध. Or after translating the syllogism into Sanskrit, we may supply a व्याप्ति of our own that will suit it, namely यत्र यत्र सर्वपरिग्रही-तत्वाभावस्तत्राप्रमाणत्वम् यथा शुक्तिरजते. Here if we had any विपक्षदृष्टान्त where the हेतु (असर्वपरिग्रहीतत्व) co-existed for certain with the साध्याभाव (प्रमाणत्व), the fallacy whould have been साधारण. Now the व्यतिरेक of this latter व्याप्ति is यत्र यत्र प्रमाण-त्वं तत्र सर्वपरिग्रहीतत्वम्, which when retranslated into English becomes : " All true things are universally believed " ; but this is not the true converse of the major premise already given, and hence it is false. Thus an *Illicit process of major* in English becomes व्याप्यत्वासिद्ध in Sanskrit ; while a व्याप्य-त्वासिद्ध, when converted into English, will be either an *Illicit major* or a *material* fallacy, named by Whately the Fallacy of undue assumption.

II. Take now an example of an " ambiguous middle."

All angles of a triangle are equal to two right angles;

A B C is an angle of a triangle ;

∴ A B C is equal to two right angles.

This is called a Fallacy of Division and Composition, because the *middle term*, 'angles of a triangle' is taken collectively in the *major* and distributively in the *minor* premise.

In Sanskrit it will be :—

अयं कोणो द्विसमकोणसमः ।
त्रिकोणस्थितकोणत्वात् ।
ये ये त्रिकोणस्थिताः कोणास्ते द्विसमकोणसमाः ।

This is स्वरूपासिद्ध, and the fallacy at once appears by expressing the व्याप्ति correctly, यत्र यत्र त्रिकोणस्थितकोणसमुदायत्वं तत्र द्विसमकोणसमत्वम्. The real साध्यव्याप्य हेतु is not °कोण simply but °कोणसमुदाय, which does not exist on the पक्ष; hence the हेतु is स्वरूपासिद्ध. Or you can say that the real हेतु is त्रिकोणस्थितकोणान्यतरत्व, which is not साध्यव्याप्य; and then the fallacy will be असाधारण.

III. Take another example of an "ambiguous middle," called *Fallacia accidentis* or *Fallacia a dicto secundum quid ad dictum simpliciter*:—

What is bought in the market is eaten;
Raw meat is bought in the market;
∴ Raw meat is eaten.

Which converted into Sanskrit becomes:—

क्रव्यं भक्षणीयम् ।
आपणक्रीतत्वात् ।
यद्यदापणक्रीतं तत्तद्भक्षणीयम् ।

Here the हेतु is सोपाधिक and the व्याप्ति is incorrect because there is an implied *condition* भक्षणयोग्यत्वे सति. In the orig-

inal, the *middle* term, 'a thing bought in the market' implies in the *major* premise "as to its substance only," in the *minor* "as to its condition and circumstances." It is therefore ambiguous.

IV. Take this argument in a circle:—

Every rule has exceptions;

This is a rule;

∴ This rule (viz. that every rule has exceptions) has exceptions.

∴ Some rules have no exceptions.

In Sanskrit it will be:—

'नियममात्रं व्यभिचरती'ति नियमो व्यभिचारी ।

नियमत्वात् ।

यत्र यत्र नियमत्वं तत्र तत्र व्यभिचारित्वं ।

This is साधारण because there is no विपक्षदृष्टान्त on which both साध्य and साधन are known to be absent.

V. Take another case of an *Ambiguous middle*.

Water is liquid;

Ice is water;

∴ Ice is liquid.

This equals to:—

हिमं द्रवरूपम् ।

जलीयत्वात ।

यद्यज्जलीयं तद्द्रवरूपं यथा सरित्समुद्रादि ।

This is also साधारण, for we know that जलीयत्व resides on the विपक्ष करकादि where there is no द्रवत्व.

VI. Take this syllogism in the third figure:—

All books are liable to err;

All books are human productions;

∴ All human productions are liable to err.

Here the conclusion is right but it does not follow from the premises, the only legitimate conclusion from them being '*Some* human productions etc.,' when it will be *Darapti* in the Third Figure. The fallacy is *Illicit Minor*. Translated into Sanskrit, the above syllogism will be:—

मानवकृतिमात्रं प्रमादार्हम् ।

पुस्तकत्वात् ।

यत्र यत्र पुस्तकत्वं तत्र तत्र प्रमदार्हत्वम् ।

This is clearly भागासिद्ध.

VII. Lastly take this stock instance of *Undistributed Middle*:—

All is not gold that glitters;

Glass glitters;

∴ Glass is not gold.

= Some things that glitter are not gold;

Glass is a thing that glitters;

∴ Glass is not gold.

= काचो न सुवर्णम् ।

तेजस्वित्वात् ।

यत्र यत्र तेजस्वित्वं तत्र तत्र सुवर्णत्वाभावः यथा हीरके ।

Here the व्याप्ति is व्यभिचरित, because there is no विपक्षदृष्टान्त on which तेजस्वित्व is absent, and hence the fallacy is साधारण.

Examples of Sanskrit Syllogisms.

10. To convert a Sanskrit syllogism into English is much easier because there you have the argument already put into a syllogistic form.

I. Thus take for example:—

यागीया हिंसाऽधर्मस्य जनिका ।

हिंसात्वात् ।

या या हिंसा साऽधर्मस्य जनिका ।

This is सोपाधिक with निषिद्धत्व as उपाधि, and will become in English:—

Animal-killing is sinful;

A sacrifice is killing of an animal;

∴A sacrifice is sinful.

Here if you insert 'all' before the subject in the *major* premise, it becomes false, and the fallacy is that of undue assumption; or the word 'killing' may be said to be used in two different senses in the *major* and *minor* premises, when it is 'ambiguous middle' or 'the fallacy of four terms.' If you do not insert 'all' in the *major* premise, then it is a fallacy of *Undistributed middle.*

II. Or take an असाधारण-सव्यभिचार:—

जीवच्छरीरं व्यापारवत् ।

प्राणादिमत्त्वात् ।

यद्यत् प्राणादिमत्तद्व्यापारवत् ।

Which in English is equal to:—

All living things have motion;

Our body is a living thing;

∴Our body has motion.

Here the *major* term is not distributed in the premise, and hence the fallacy is an *Illicit process of major.* The illustrations given in this as well as in the last preceding note will show that no hard and fast rule can be laid down as to the correspondence of any हेत्वाभास with any particular English fallacy or *vice versa.* It is the mode of conversion that determines them, and cases often occur in which the same हेत्वाभास when converted differently gives different fallacies.

SECT. LVIII. उपमानम्.

Comparison is the immediate Cause of Analogy. Analogy is the knowledge of the connection of a name with the object denoted by it. The knowledge of similarity is its proximate Cause. The recollection of an authoritative direction is the intermediate operation.

Analogy and Comparison.

1. The third kind of proof is *Comparison* which is ' the immediate cause of the *apprehension* अनुभव) known as *Analogy.* ' Analogy is defined as 'the knowledge of the relation existing between a name (संज्ञा-गवयपदं) and the thing denoted by it (संज्ञी-गवयपदवाच्यः). The immediate cause of this is the knowledge of the similarity of गवय with गो, which is therefore called उपमान. The process of acquiring this उपमिति may be described thus: A man who has never seen a *gayal*, nor knows what it is like, is told by some forester (who being daily familiar with *gayals* is आप्त ' worthy to be believed ') that a *gayal* (*Bos Gaveas*) is like a cow. He then goes to a forest and there sees a strange animal unknown to him before. He then perceives in that animal some resemblance to the cow which of course he knows full well. The perception of this similarity with the cow reminds him of the former direction (अतिदेशवाक्य) of the forester that a *gayal* is like a cow. Then, combining this reminiscence with his actual perceptive knowledge of similarity between the cow and the new animal, he at last concludes that the animal which he sees before him is a *gayal.* This last cognition namely " This is a gayal " is the उपमिति, for it is a knowledge of the denotative relation of the word *gayal* with the object perceived. " This is a *gayal* (अयं गवयः) " means " This object bears the name, or is denoted by the name *gayal* (अयं गवयपदवाच्यः), " that is, there exists between this object and the word *gayal* the relation of denotation (वाच्यवाचकभाव). This relation is the संज्ञासंज्ञिसंबंध, and the knowledge of it is उपमिति. Two previous cognitions are required to produce this उपमिति, namely, the verbal knowledge of the forester's direction (अतिदेशवाक्यार्थज्ञान) and the actual perception of the resemblance to the cow that was existing in the animal *gayal.*

2. Both these previous cognitions are indispensible to a valid analogy; but the question still remains which of these is the करण of उपमिति, and which is सहकारि, that is, which is more immediate, and which is only accessory. The ancient and the modern schools of *Naiyâyikas* are diametrically opposed on this point; the former, *i. e.* the ancients, regard अतिदेशवाक्यार्थज्ञान as the करण and सादृश्यज्ञान a सहकारि, while the moderns prefer just the opposite view. The recollection of the अतिदेशवाक्यार्थ is of course the व्यापार according to both. *Annambhatta* here evidently accepts the view of the moderns, for he expressly says that the सादृश्यज्ञान, *i. e.* the गवयनिष्ठ-गोसादृश्यप्रत्यक्ष, is the करण of उपमिति. He does not however seem to follow the moderns in taking the exact form of the उपमिति to be गवयो गवयपदवाच्यः, and not अयं or असौ गवयपदवाच्यः the difference between the two being that the second cognition would inform him that the particular object alone is denoted *gayal*, while the first conveys that the whole class of which that object is an individual is denoted by the name *gayal*. *Viśvanâtha*, who is a modern *in toto*, says न त्वयं गवयपदवाच्य इत्युपमितिः । गवयान्तरे शक्तिग्रहाभावप्रसङ्गात्.* Although the करण of उपमिति is declared to be the सादृश्यज्ञान, it is not the sole करण, for an उपमिति may arise even from a knowledge of dissimilarity or a mere peculiarity. Hence S. C. divides उपमान (उपमितिकरण) into three kinds: तच्चोपमानं त्रिविधम् । सादृश्यविशिष्टपिण्डज्ञानं, असाधारणधर्मविशिष्टपिण्डज्ञानं, वैधर्म्यविशिष्टपिण्डज्ञानं च. 'उपमान is of three kinds, *viz.* the knowledge of an amimal possessing (1) a similarity, (2) a peculiar property or (3) a dissimilarity.' गोसदृशो गवयः is an example of the first kind; that of the second is नासिकालसदेकशृङ्गः खड्गमृगः (a rhinoceros has one horn adorning its nose); the example of a dissimilarity would be उष्ट्रो नाश्वादिवत्समानपृष्ठह्रस्वग्रीवशरीरः (a camel does not possess a level back and short neck like a horse). The word सादृश्य in the text is therefore to be taken as illustrative (उपलक्षण) of the other two.

The proximate cause of Upamiti. (margin)

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* S. M. Calc. ed. p. 78.

Comparison as an independent proof.

3. In accepting उपमान and शब्द as independent proofs *Annambhatta* follows *Gotama*. The *Vaiśeshikas* as well as the *Sânkhyas* do not accept उपमान as a separate proof. They include it under अनुमान. *Vâchaspati* explains this view thus: गवयशब्दो गोसदृशस्य वाचक इति प्रत्ययः सोप्यनुमानमेव । योऽहि शब्दो यत्र वृद्धैः प्रयुज्यते सोऽसति वृत्त्यन्तरे तस्य वाचकः । यथा गोशब्दो गोत्वस्य । प्रयुज्यते चैवं गवयशब्दो गोसदृश इति तस्यैव वाचक इति तज्ज्ञानमनुमानमेव ।*

The *Naiyâyika's* reply to this argument may be given in *Nîlakantha's* words:—वैशेषिकास्तु पदवाच्यत्वव्याप्यसादृश्यादिपरामर्शात्पदवाच्यत्वस्यानुमितिरेवातो नोपमानं प्रमाणांतरमित्याहुः । तच्चिन्त्यं, व्याप्तिज्ञानमन्तरेणापि पदवाच्यत्वप्रमितेरनुभवसिद्धत्वात् । The अनुमान as framed by the *Vaiśeshikas* would be अयं पिण्डो गवयपदवाच्यः । गोसादृश्यत्वात् । यत्र यत्र गोसादृश्यं तत्र गवयपदवाच्यत्वं । But our daily experience tells us that such a व्याप्ति is not necessarily true, nor is it essential for the knowledge that a certain word denotes a certain object. Hence उपमान is different from अनुमान. The fact is that the concepts derived from analogy are generally approximate or tentative only, not positive like those of perception or inference. They are very useful in practical life, and a distinct proof must be assumed to account for them. *Udayanâchârya* from whom *Annambhatta* has borrowed his definition of उपमिति has made this clar in the following verse in *Kusumânjali*:—

सम्बन्धस्य परिच्छेदः संज्ञायाः संज्ञिना सह ।
प्रत्यक्षादेरसाध्यत्वादुपमानफलं विदुः ॥†

'The certain knowledge (परिच्छेद) of संज्ञासंज्ञिसंबंध is regarded as the result of an independent proof उपमान, because it cannot be obtained by any other known proof such as *Perception*.

SECT. LIX. शब्दः

Word is a sentence spoken by an authority. Authority is a person who speaks truth. Sentence is a group of words, e. g. bring a cow. Word is a thing having power (of conveying meaning). Power is a convention made by God that certain sense be understood from certain word.

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* *Sânkhya-Tat-K.* p. 278.

† *Kus.*, Cowell's Ed. III, 8. and 31.

1. The author now proceeds to the fourth proof, *Word*. It is defined as "the sentence or proposition of (uttered by) a credible or authoritative person." An 'authoritative person' (आप्त) again is "he who speaks the truth." Truth (यथार्थ=यथाभूतोऽर्थः) is " an object as it exists in reality." The *verbal knowledge* (शाब्दबोध) of truth is the representation of a thing just as it exists. A *proposition* (शब्द) which conveys such true *verbal knowledge* is यथार्थवचन, and he who asserts such a proposition is यथार्थवक्ता or आप्त. V. V. therefore defines an आप्त as प्रकृतवाक्यार्थविषयकयथार्थशाब्दबोधविषयकतात्पर्यवान्, ' he who conveys a meaning (तात्पर्य), that is the subject of a true *verbal knowledge* concerning the sense of the sentence uttered; that is, a person is आप्त when the words spoken by him convey यथार्थशाब्दबोध, and a शाब्दबोध is यथार्थ when it accords completely with the external reality of things. These definitions of आप्त and यथार्थ are very characteristic because they clearly show that according to *Naiyâyikas* the ultimate test of the truth of *verbal knowledge* was not the authority attaching to the speaker himself, but the fact of his words being in harmony with the reality of things. Having defined an आप्त, the author defines a वाक्य as "a collocation of words such as, 'Bring a cow,' " while a word is "that which possesses the *power* (शक्ति) of coveying a meaning."

Word.

2. These definitions of a वाक्य and a पद are very important, because they embody a particular theory of शाब्दबोध which distinguishes the *Naiyâyikas* from other schools, and which has become the subject of several interminable controversies. The *Naiyâyikas*, are on this point particularly opposed to the *Mîmâmsakas* who hold the doctrine of पदानामन्वयविशिष्टे शक्तिः, while the *Naiyâyikas* maintain the contrary view, पदानामन्वय एव शक्तिः.

The Nyâya and Mîmâṁsâ theories of verbal knowledge.

3. The *Mîmâmsâ* theory of the import of propositions is rather complicated. Along with the grammarians they hold that the verb is the principal word in a proposition (आख्यातप्रधानं वाक्यं), because it is the verb that forms the copula as it were to connect a number of words into a sentence. If one only says

The two theories contrasted.

देवदत्तः ग्रामम्, we can make nothing out of those disconnected words ; but as soon as the verb गच्छति is added, the whole forms a connected proposition conveying the idea of Devadatta's motion to the town. The idea of motion is the chief significance of the sentence, the word देवदत्त and ग्राम simply serving to specify and define as it were that motion. गच्छति denotes ' motion ' in general; the addition of देवदत्त limits the sense to the motion of a particular individual, while the further addition of ग्राम still more restricts this limited motion of an individual to one in a particular direction and towards a particular place. The whole sentence thus means देवदत्तकर्तृक—ग्रामकर्मक—गमनक्रिया, in which क्रिया is the विशेष्य while the other two expressions simply act as limiting qualifications. All the words of a sentence are interdependent,because the predicate is too vague and general to convey any sense unless otherwise determined, while the substantives and other words are merely subordinate members of the sentence. By themselves the words of a sentence import nothing, but placed in the sentence they denote the क्रिया as happening in a particular thing. Thus घट alone signifies nothing, but when we join घटम् with आनय, we at once know it to be आनयनक्रियानिरूपितकर्मत्वशक्ति, that is, we know घट not independently, but only as standing in some relation to the action of ' bringing. ' When each word is thus apprehended, as related in some way to the क्रिया, we get the meaning of the whole sentence in the form of that क्रिया as conditioned and particularized by the several substantives. This doctrine is expressed by saying क्रियान्वित एव पदानां शक्तिः, or as *Annambhatta* puts it at the end of his commentary, इतरा-(क्रिया-) न्विते शक्तिरिति प्रभाकराः.

4. The followers of *Gotama*, adds T. D., deny the necessity of thus apprehending each word separately before combinig them in a sentence, when the meaning of the whole sentence can as well be conveyed at once in the form of the collective sense of all the words ; that is, according to *Naiyâyikas* the शक्ति resides in the अन्वय itself, and not in the अन्वितपद s. Single words, say they, like घट पट etc., convey no sense, not because they are अनन्वित, but because the

three requisites of शाब्दबोध, namely, आकांक्षा, संनिधि and योग्यता, are not satisfied. A proposition or sentence is nothing but a number of significant words (शक्तपद) which possess आकांक्षा, योग्यता and संनिधि; and the collective meaning of such words will be apprehended even though there be no क्रियावाचकपद in the sentence, e. g. काञ्च्यां त्रिभुवनतिलको भूपतिः which designates a king in the town of Kâñchî without attributing any action to him. Similarly we say त्रयः कालाः, although no क्रियावाचकपद can be supplied there; for the only possible verbs applicable to त्रयः कालाः are सन्ति or (जीवेन) ज्ञायन्ते, but the first is inapplicable, as there is no specification in त्रयः कालाः of any particular time, past, present or future, while ज्ञायन्ते is inappropriate, because 'time' is unknowable by human beings. There can therefore be no क्रियान्वय in त्रयः कालाः and yet the words convey a sense because the above three requisites are satisfied. According to *Mîmâmsakas* and grammarians a proposition is धात्वर्थमुख्यविशेष्यक, that is, चैत्रस्तण्डुलं पचति would be interpreted as चैत्रकर्तृक—तण्डुलकर्मक-पाकक्रिया. But the above example shows that this is not always possible; and therefore in such cases a proposition is प्रथमान्तार्थमुख्यविशेष्यक only, that is, the illustration would mean चैत्रनिष्ठकृतिजन्यपाकजन्य-फलशाली तण्डुलः. (The consequence of this nice distinction is that according to *Mîmâmsakas* a क्रियाबोधकवाक्य or विधिवाक्य is alone legitimate, while a सिद्धार्थबोधक वाक्य, which they call अर्थवाद, has no independent significance, and can exist only as a part of another क्रियाबोधक वाक्य.) The *Naiyâyikas* of course consider both kinds of sentences equally significant and independent. Hence the definition of a वाक्य in the text is (शक्त)पदसमूहः, which implies, as V. V. says, that पदसमूहादेव शाब्दबोधो नैकस्मादिति भावः '*Verbal knowledge* is obtained not from one word (such as a क्रियाबोधक) but from all the words together.'

5. On a proper analysis it will be found that a proposition consists of a subject, a predicate and a copula. The predicate is always resolvable into an attribute residing in the subject and the copula is the connecting link showing the relation that exists between the subject and the attribute predicated of it. Thus in the sentence "Man is mortal", the attribute of mortality is predicated of man, and the verb is the copula connecting the two. In मर्त्यत्ववान् मनुष्यः or गमनशीलो देवदत्तः we denote substantives possessing attributes. This view is very similar to the *Naiyâyika* doctrine.

6. From the import of proposition we pass on to the import of single words. A *word* is defined as a thing that is शक्त 'having *power* or *significance.*' But what is शक्ति? *Annambhaṭṭa* defines it as "the convention made by God that such and such a meaning should be understood from such and such a word" Some copies here read ईश्वरेच्छासंकेतः, but the word इच्छा is redundant as संकेत implies इच्छा. According to this definition language is the creation of God, and each word is capable of conveying a particular sense because God has so willed it. The definition is in accordance with the view of the ancients. The moderns say इच्छामात्रं शक्तिः, meaning that even the will of man can give significance to words, as in proper names like चैत्र, मैत्र, डित्थ etc. The ancients do not deny the significance of these latter kind of words, but call them simply पारिभाषिक or conventional, while only those derived from God are शक्त in the proper sense of the term. But this is not quite satisfactory, for one might say that although the two kinds of words may be named separately, no difference is really observable between their *power* of denoting particular objects. देवदत्त denotes an individual exactly in the same way as घट denotes a jar although one word is of human and the other of divine origin. A later writer therefore defends the ancient view by attributing even पारिभाषिक words to divine origin. The author of *Tarka-Prakâśa* says " 'द्वादशेऽहनि पिता नाम कुर्यात्' इति श्रुतिः । तथा च, 'द्वादशाहःकालीनपित्राद्युच्चरितनामत्वादिना नामवाच्यः शिशुः' इत्याकारकेच्छयेश्वरेण तादृशश्रुतिप्रणयनादाधुनिकेऽपि नाम्नि ईश्वरसंकेतोऽस्त्येव ।"* But this is going rather too far, or, as Sanskritists say, कुशकाशावलम्बन, supporting one absurdity by another. We know that new phraseology is invented by men in different countries to convey new ideas or denote new inventions and discoveries. Innumerable words unknown before are thus added to the language. The existence of many distinct and unconnected languages in the world is the strongest proof of the absurdity of the theory of a divine origin of any particular language.

Import of words.

7. It is probably to avoid this controversy that our author gives another and a better definition of शक्ति in the commentary, अर्थस्मृत्यनुकूलः पद-पदार्थसम्बन्धः शक्तिः '*Power* is the relation

Another definition.

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* Bhîmâchârya: *Nyâya-kośa*, 2nd ed p. 782.

of a word and an object, that always serves to revive the memory of that object (whenever the word is spoken).' This definition, says *Nîlakantha*. is purposely made vague so as to apply to शक्ति, whether it is regarded as an independent पदार्थ as the *Mîmâmsakas* do, or whether it is identified with the will that makes the convention, as the *Naiyâyikas* hold. The *Mîmâmsaka's* arguments for regarding शक्ति as a separate पदार्थ are summed up in the couplet:—

न द्रव्यं गुणवृत्तित्वाद् गुणकर्मबहिःकृता ।
सामान्यादिषु सत्त्वेन सिद्धभावान्तरं हि सा ॥

Power is not a substance as qualities inhere (in them); it is also distinct from qualities and actions. It resides in genus and other categories. It must therefore be regarded as a separate category.

The *Naiyâyikas* however refuse to recognize शक्ति as a separate category on the ground that, as each substance *e. g.* पंकज, कुमुद etc. is the object of several शक्तिs, to accept the independent existence of them all would involve गौरव. शक्ति is therefore properly speaking only a *power* in a word to denote the meaning imposed upon it by divine or human will.

Conflicting theories.

8. But the question still remains where this संकेतरूपा शक्ति is apprehended. In other words, what does a word like घट denote primarily: the object jar, or the common property jar-*ness* that resides in it, or both together? This is an important question, as it lies at the basis of the several antagonistic theories of शाब्दबोध proposed by different schools. The opinions on this point are as various and numerous as are possible to be on any single topic. Of these views four are the most important, namely, केवलजाति, केवलव्यक्ति, जातिविशिष्टव्यक्ति and अपोह. The first is adopted by the *Mîmâmsakas*, the second by modern *Naiyâyikas*, the third by ancient *Naiyâyikas*, and the last belongs to the *Bauddhas*.* The advocates of each of these views look at the significant word from different standpoints. When one says घटमानय, the speaker undoubtedly desires the thing, jar, and not the class-notion, jar-*ness* to be brought to him. That the व्यक्ति 'jar' must be somehow or other implied by the word घट is therefore necessary, for

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* Mammata : *Kâvya-Prakâśa* Bom. Ed. Ch. II. p. 30

unless it is so implied the hearer can never fetch the object. Modern *Naiyâyikas* rely on this simple fact, and say that the word घट primarily denotes the घटव्यक्ति. The capacity of being the subject of any act (अर्थक्रियाकारित्व) resides in the concrete object (व्यक्ति) alone, and hence it is the व्यक्ति on which the संकेत is made. But there are insuperable objections to this view. If घट denotes a particular घटव्यक्ति, we would require as many separate words as there are jars in the world, and the संकेत on each would have to be learnt separately as they can have no connection with each other. As a matter of fact however there is only one word घट, and when we once know its *significance* as expressing a कम्बुग्रीवादिमद्वस्तु, we apply it to denote all objects having that shape. घट therefore denotes not a particular घटव्यक्ति, but the property कम्बुग्रीवादिमत्त्व. Further the word घट conveys many notions besides that of the व्यक्ति; it implies that the thing denoted belongs to a particular class of substances having some common properties, and it also distinguishes the व्यक्ति from other dissimilar substances. Thus the word घट performs three functions; it points out a particular object *jar*, it signifies that the particular jar is similar to all the jars in the world, and it distinguishes that jar from all other things, such as stones, walls and trees. When we say गो, we at once denote the गोव्यक्ति, the class-notion गोत्व, and the peculiarity सास्नादिमत्त्व which distinguishes a cow from other animals. In other words, गो signifies व्यक्ति, जाति and आकृति at the same time; or as a writer puts it, जातौ व्यक्तौ वैशिष्ट्ये च पदानां शक्तिः. This was the view of the ancient *Naiyâyikas*, and is apparently the one preferred by *Annambhaṭṭa*.

9. According to modern *Naiyâyikas* words denote the व्यक्ति only, and the attributes come in by implication; that is, words are primarily concrete names. But according to the जातिवादि *Mîmâmsakas* words are purely abstract names denoting the जाति only. The ancient *Naiyâyikas* seem to have adopted a middle course between these extremes by holding that words denote neither केवलव्यक्ति nor केवलजाति, but जातिविशिष्टव्यक्ति,

that is, a particular object घट as possessing the class-notion घटत्व. The reason given by T. D. for rejecting the केवलजातिवाद is, that the actions of ' bringing ' and 'binding' expressed in the propositions घटमानय and गौरनुबन्ध्यः, are possible in the respective व्यक्तिs only. If a word signified जाति only, the sentence would mean घटत्वमानय and गोत्वमनुबन्ध्यम्, which is absurd because घटत्व and गोत्व cannot be separated from the concrete objects. The *Mîmâmsakas* however maintain that the fact that घटत्व or गोत्व cannot be separated from the concrete object (अविनाभाव) is exactly the reason why the significance of the word घट or गो should, for the sake of लाघव, be confined to the जाति, while the notion of व्यक्ति may be conveyed by आक्षेप or necessary implication. This view जातावेव शक्तिर्व्यक्तिलाभस्त्वाक्षेपात् was held by the *Mîmâmsakas*, grammarians' and rhetoricians, and is rejected by *Annambhatta*.

10. The last of the four views above mentioned which was held by the *Bauddhas* was that the primary import of words was only अपोह or अतद्व्यावृत्ति, distinction of all other different objects from it. What do we understand, they argued, by a word such as घट ? Not an external object because we never really know external objects ; nor the जाति, because, जाति is nothing more than a mere conception formed by our mind and imposed upon what we call external objects. What घट then really signifies is that a certain thing possesses some peculiarities which distinguish it from all other things. We never know what घट or घटत्व *is*; we only know what it is *not*, viz. that it is not पट or कुड्य. We have therefore only a negative knowledge of things, and consequently the import of words must also be negative. The *Vedântins* by way of harmonizing the above views, each of which expresses a part of the truth, have started the theory that the *power* of a word resides in both the जाति and the व्यक्ति, but in different ways; that is, it is active or expressive in जाति, and passive or latent in the व्यक्ति. The *Vedânta-Paribhâshâ* says, गवादिपदानां व्यक्तौ शक्तिः स्वरूपसती न तु ज्ञाता। जातौ तु सा ज्ञाता हेतुः ।.* This appears to mean that a word primarily signifies जाति,

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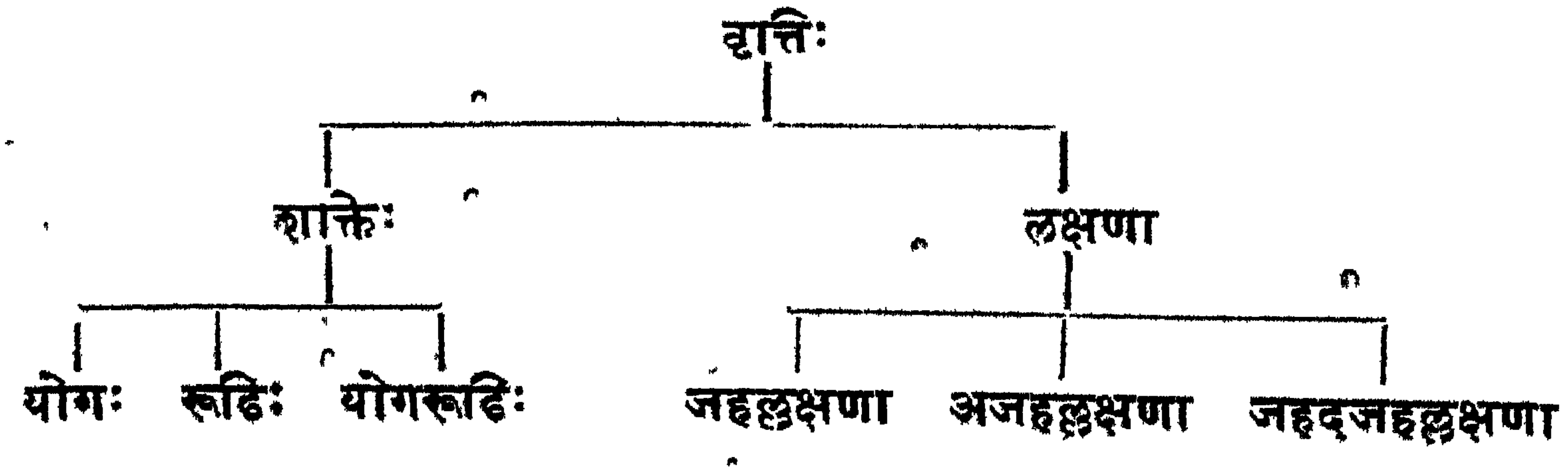
* *Ved. Par.* Calc. ed. p. 17.

but its capability of signifying the class-notion is derived from its acknowledged connection with the concrete objects comprised in that class. Thus हस्तिन् signifies the general notion of a trunked animal ; but it does so because the property 'trunk' was found in the actual object elephant.

11. It must have been noticed that the distinction between the denotation and the connotation of words insisted upon by Mill and other English logicians does not strictly speaking find a place in any of these views. But if we may use those terms as applying to the signification of व्यक्ति and जाति respectively, we might say that in केवलव्यक्तिवाद् words are purely denotative, while in केवलजातिवाद् they are purely connotative. Similarly in the जातिविशिष्टव्यक्तिवाद् of the ancient *Naiyâyikas* they are both denotative and connotative, while in the theory of अपोह they connote only the *differentia*.

The two-fold power of words.

12. A पद् is defined as शक्त, but शक्ति does not exhaust the whole import of words. Every word is capable of conveying two meanings, one primary or direct and the other secondary or implied. The relation by which a word signifies a particular thing is called वृत्ति, which is of two kinds, शक्ति or अभिधा (expression) and लक्षणा (implication). The first is created by संकेत and is inseparable from the word ; the second operates in the absence of the first, and being derived from it is entirely dependent on it. Hence the definition of a पद् as शक्त is not अव्याप्त on a लाक्षणिकपद्, for a पद् can never be लाक्षणिक unless it is also शक्त. Each of these two kinds of वृत्ति or special relation is subdivided into three sorts, thus.—



13. The *expressive* power (शक्ति) of words is of the above three kinds; and so words are divided into three classes according as they operate through any one of these modes. योग or etymology is defined अवयवशक्ति 'the power of the several roots or component parts of the words.' A यौगिक शब्द is therefore one which adheres to its etymological meaning and conveys nothing more nor less than what is implied in the parts, *e. g.* पाचक which, being compounded of the root पच् and the कर्तरिप्रत्यय, signifies पचनकर्ता. रूढि or customary significance is defined समुदायशक्ति, the power of the whole word without any reference to its parts. Not that such रूढ words have no etymology, for there is an influential school of grammarians who assert that all words are derived from roots; but these रूढ words have completely abandoned their original signification and acquired a new sense. Thus घट signifies 'jar' not because it is derived from घट or any other root, but because convention has attached that meaning to it. Majority of simple words in Sanskrit belong to the third kind, namely, योगरूढ words in which both the etymological and the customary meanings are partly retained. Words like पङ्कज, मधुकर or हस्तिन् have no doubt an etymological sense, but it is restricted by custom to a particular object or kind of object comprised in the original meaning. Etymologically पङ्कज might mean any thing produced in mud, such as a lotus or a frog. But custom has narrowed the meaning of the word to a lotus. Similarly हस्तिन् has come to denote only one out of many animals having हस्त, such as elephants men and monkeys. Some mention a fourth variety named यौगिकरूढ, such as उद्भिद्, which may be interpreted either by etymology or by customary sense independently.

The expressive power.

14. All these varieties require the knowledge of the संकेत, either on the अवयव or on the समुदाय or on both; and this संकेत is learnt by the child in various ways of which the वृद्धव्यवहार described by T. D. is one. Eight of these generally recognized modes of learning शक्ति are mentioned in the following couplet:—

How Convention is known.

शक्तिग्रहो व्याकरणोपमानकोशाप्तवाक्याद्व्यवहारतश्च ।
वाक्यस्य शेषाद्विवृतेर्वदन्ति सांनिध्यतः सिद्धपदस्य वृद्धाः ॥

The import of words is learnt in any of the following ways: (1) Grammar, as the meaning of roots, terminations and cases; (2) Comparison, as when the meaning of गवय is known by the similarity of a *gayal* with a cow; (3) Dictionary, as of synonyms स्वर्ग, नाक etc.; (4) Express assertion of a credible person, as कोकिलः पिकपदवाच्यः; (5) Usage of elders as when one elder person says to another 'Bring a cow,' or 'Bring a jar,' the child eliminates the common word 'bring' and thus determines the meanings of गो and घट; (6) Context, as in the vedic text यवमयश्चरुर्भवति the exact meaning of यव is known by a concluding passage; (7) explanation by synonyms or paraphrase as घटः कलशः, पचतीति पाकं करोति; and lastly (8) Contiguity with a well-known word, as in इह सहकारतरौ मधुरं पिको रौति the meaning of पिक is known by its association with सहकार and मधुर. Some also add signs of hand etc. as the ninth, as when one points a finger to a woman and says to the child इयं ते माता, the gesture imparts to the child the knowledge of the word माता.

Lakshaṇâ or Implication.

15. The other kind of वृत्ति is लक्षणा *Implication*, which is defined as स्वशक्यसंबंधः (स्वं लाक्षणिकं पदं तस्य शक्यः वाच्योऽर्थः तत्संयोगः) 'connection with the expressive sense of the word.' It is resorted to only when there is मुख्यार्थानुपपत्ति 'inapplicability of the primary sense in the context.' In गङ्गायां घोषः for instance, the primary sense of गङ्गा, namely the stream, is inapplicable because a hut cannot stand on the current; and hence गङ्गा is made to signify the bank of the river which is connected with the current by संयोग. If *Annambhaṭṭa* accepted the views of the ancient *Naiyâyikas* about शक्ति, he follows the moderns with regard to लक्षणा. According to the ancients the essential condition for लक्षणा was अन्वयानुपपत्ति 'unsuitability of the अन्वय or meaning of the sentence'; but there is no such अन्वयानुपपत्ति in

examples like काकेभ्यो दधि रक्ष्यतां or यष्टीः प्रवेशय, which by themselves give a fair sense without any लक्षणा, although that sense is clearly not the one intended by the speaker. Hence T. D. says तात्पर्यानुपपत्तिर्लक्षणाबीजम्. लक्षणा is resorted to when the primary sense is unsuited, not to the वाक्यान्वय, but to the वक्तृतात्पर्य. The three-fold division of लक्षणा into जहत्स्वार्था, अजहत्स्वार्था and जहदजहत्स्वार्था is also taken from the moderns. जहल्लक्षणा is that where the primary sense is wholly abandoned and a new one substituted, as in मञ्चाः क्रोशन्ति, where मञ्च signifies a child sleeping on a cot and not the cot itself. In अजहत्स्वार्था the word retains its primary sense and conveys something more, as in छत्रिणो यान्ति where both those who have umbrellas and those who have not are implied, or as in काकेभ्यो दधि रक्ष्यताम् where all birds including crows are to be kept off. The examples of जहदजहत्स्वार्था are सोऽयं देवदत्तः or तत्त्वमसि, where only a part of the primary meaning is retained and a part is left out as being inapplicable. In सोऽयं देवदत्तः सः means तत्कालीनो देवदत्तः while अयम् means एतत्कालीनो देवदत्तः and so to establish the identity of the two we leave out the qualifications तत्कालीन and एतत्कालीन. In तत्त्वमसि the तत् denotes निर्गुणब्रह्म and त्वम् denotes सगुणजीव; so we leave out the properties निर्गुणत्व and सगुणत्व and make the two substances identical. A fourth kind लक्षितलक्षणा is also recognized by some, as in द्विरेफ which primarily signifies the word भ्रमर and through it the object, *bee*. N. B. repudiates the last kind on the part of the *Naiyâyikas*, and ascribes it to *Vedântins*.

Another sub-division

16. Another division of लक्षणा is into रूढा or शुद्धा and गौणी, otherwise called प्रयोजनवती. Most of the above examples are of the first kind where the *implication* solely rests on the unsuitability of शक्यार्थ. In गौणी *implication* is resorted to in order to suggest a third sense called प्रयोजन. As in गङ्गायां घोषः the qualities of coolness and holiness which really belong to the current are transferred to the bank. This suggested third sense is called व्यङ्ग्यार्थ and is supposed by rhetoricians to be conveyed by a third mode called व्यञ्जना.

17. व्यञ्जना is of two kinds शाब्दी and आर्थी, but *Naiyâyikas* recognize neither. शाब्दी, they say, as in the above example, is invariably included in the गौणीलक्षणा and so need not be regarded as a separate mode. आर्थी is found in such examples as :—

Vyañjanâ not recognized.

गच्छ गच्छसि चेत्कान्त, पंथानः सन्तु ते शिवाः ।
ममापि जन्म तत्रैव भूयाद्यत्र गतो भवान् ॥

Here the meaning conveyed by the speaker is प्रियगमनोत्तरं मे प्राणवियोगो भविष्यति; but this sense, says T. D., is obtained by inference, and so the व्यञ्जना process becomes अन्यथासिद्ध. According to *Naiyâyikas* therefore there are only two modes of conveying sense, *expression* (शक्ति) and *implication* (लक्षणा), of which the latter being secondary is based on the former. The definition of पद (शक्तं पदं) is therefore applicable in both cases.

SECT. LX, AND LXI. आकाङ्क्षा-योग्यता-संनिधयः

Expectancy compatibility, and juxtaposition are the causes of the knowledge of the meaning of a sentence. Expectancy is the inability of a word to convey the meaning of a sentence on account of the absence of some other word. Compatibility is the non-contradiction of the sense. Juxtaposition is the consecutive utterance of words.

A sentence devoid of expectancy, etc. is unauthoritative; e. g. (words) cow, horse, man, elephant are not authoritative, being devoid of expectancy, etc. (Sentence) sprinkle with fire is unauthoritative for want of compatibility ; (words) *Bring a cow pronounced at intervals are not authoritative owing to want of juxtaposition.*

1. शब्द has been defined as a वाक्य, but an intelligible sentence cannot be formed simply by stringing together any number of words, as घटः पटः गां भित्तिः. In order to convey the combined वाक्यार्थ the words require the aid of some accessory properties, which are three, आकाङ्क्षा (Expectancy), योग्यता (Compatibility) and संनिधि (Juxtaposition).

Three requisites of a proposition.

2. The simplest definition of आकाङ्क्षा is अभिधानापर्यवसानम् 'non-completion of the sense' owing to the absence of some other word or words. *Annambhaṭṭa*, defines it as 'the inability of a word (पदस्य) to convey (अननुभावकत्वं) the

Expectancy.

whole meaning of the sentence (अन्वय), which inability is caused (प्रयुक्त) by the absence व्यतिरेक of some other word (पदान्तर). If one says simply घटम्, a desire is at once created to know *what about the jar*, and is satisfied only when we supply some such word as आनय which completes the sense. This desire to know is called आकाङ्क्षा and depends generally on the exact form of the words used. Thus घटमानय conveys four notions, a *jar* (घट), the objective relation (अमप्रत्यय), the act of bringing (आनी) and the command (the termination of Imp. 2nd sing.); and if any of these notions is wanting the sense remains so far incomplete. The imperfection cannot however be made up by saying घटः कर्मत्वं आनयनं कृतिः although these words import the same thing as घटमानय, because no आकाङ्क्षा is raised in this case.

Compatibility.

3. योग्यता or compatibility is "the non-contradiction of sense." A word is said to have योग्यता with another when the meanings conveyed by the two are not inconsistent with each other. Thus we cannot say वह्निना सिञ्चति or जलेन दहति, because the notions of fire and sprinkling as well as of water and burning are inconsistent and incompatible with one another. A sentence like this would therefore be meaningless owing to the impossibility of combining the two incongruous notions in one अन्वय.

Juxtaposition.

4. The third requisite is संनिधि or आसत्ति which consists in "the utterance of consecutive words one after another without interval between any two of them." A वाक्यार्थ is made up by the combination of the several notions of words, and it is therefore necessary that the impression made by each should remain fresh until this combination is effected. If however a long break occurs in the middle of a sentence, the previous impressions vanish before the sentence is finished, and the sense would remain incomplete. What constitutes संनिधि is, as T. D. remarks, the unbroken apprehension of all the words; and hence actual utterance of words is not absolutely necessary. In a written or printed book for

instance we have no utterance, and yet we understand the वाक्यार्थ because the words are placed in juxtaposition. आकाङ्क्षा, योग्यता, and संनिधि, T. D. further adds, are necessary preliminaries for the comprehension of a sentence, not in themselves, but as known; that is, it is their knowledge that is required irrespective of their actual existence or absence. If a man wrongly conceives them to exist in a sentence when they really do not, he will make out a meaning of the sentence, while he will not understand a sentence possessing all the three, if he fails to detect their presence.

Intended sense.

5. *Viśvanâtha* adds a fourth requisite तात्पर्यज्ञान* 'knowledge of the intention of the speaker,' which is often as much necessary for the right understanding of a sentence as any of the preceding three. For instance, the sentence सैन्धवमानय might convey two distinct senses 'Bring salt,' and 'Bring a horse.' आकाङ्क्षा, योग्यता and संनिधि, which are all satisfied here, are not in themselves able to tell us which of the two senses is to be accepted on a particular occasion, that is which of the two things is intended by the speaker. This can be determined only by knowing the वक्तृतात्पर्य, which again is to be gathered from the circumstances under which or the occasion on which the sentence is spoken. If the speaker is dining he almost certainly orders salt, while if he is dressed and is going out, he orders a horse. Without this knowledge of the speaker's intention, it will be impossible to interpret a sentence wherever a word is ambiguous or has more than one sense. Perhaps this speaker's intention may be included in the second requisite योग्यता, as compatibility of a meaning must always be judged with reference to the particular occasion or the probable intention of the speaker.

6. Although *Annambhaṭṭa* does not mention तात्पर्यज्ञान in this section, his reference to it in connection with लक्षणा in the commentary on the preceding section leaves no doubt that he accepts its necessity. His definition of तात्पर्य, namely तत्प्रतीतीच्छयोच्चरितत्वम्, is however faulty. Words which convey a sense are not necessarily uttered with an intention to convey that

* B. P. 81.

sense. A fool or an idiot sometimes utters words which he does not understand but which are intelligible to others; a parrot pronounces words which have a meaning in ordinary language; and yet there is no intention of the speaker in such cases. It may be urged against this that they are not real words at all, although appearing to be so. But what if a Vedic text is repeated by a person who understands nothing of it. The text is there and you cannot deny it, and yet there can be no वक्तृतात्पर्य. Again if a teacher expounds such a text wrongly the meaning which he intends is at variance with the truth and can never be conveyed by the text. Or suppose one reads such a text in a book; there is no speaker here and there can be no तत्प्रतीतीच्छयोच्चरितत्व. It cannot be argued that the original intention of the author of the text, *viz.* God, is to be assumed in such cases; because there are many, says *Vedânta-Paribhâshâ*, who do not recognize God as the author of the *Vedas* and yet are able to understand the meaning of them. The *Paribhâshâ* therefore proposes as a better definition तत्प्रतीतिजननयोग्यत्वे सति तदन्यप्रतीतीच्छया नोच्चरितत्वम् तात्पर्यम् 'fitness of the words to express a particular meaning, while there is no utterance with an intention to convey a different sense.'* The second clause is added to prevent a doubt in examples like सैन्धवमानय where, although सैन्धव is fit to express both salt and a horse, the intention is always to convey only one meaning and not the other. Even in cases where two meanings are intended to be simultaneously expressed, as in दूरस्था भूधरा रम्याः, the definition will apply since तत् will comprehend both the senses.

SECT. LXII. वाक्यम्

1. *A sentence is of two kinds, sacred* (वैदिक) *or profane* (लौकिक); *the sacred, being pronounced by God, is always trustworthy, while a profane sentence is trustworthy if pronounced by a credible person: Any other, is untrustworthy.*

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* *Ved Par.* Calc. ed. p. 20.

Two kinds of sentences

1. Having defined शब्द्, word, as the fourth proof in general the author devides it into two sorts, divine and profane. The वैदिक वाक्य is of four kinds श्रुति, स्मृति, इतिहास and पुराण, of which the preceding is of a higher authority than the next following. The definition in the text applies only to the श्रुति, as other compositions are of human origin. श्रुति or *Vedas* proper are four ऋक्, यजुस्, सामन्, and आथर्वण, each of which is divided into three parts मन्त्र or संहिता, ब्राह्मण, and आरण्यक the last including उपनिषद्. All these being of divine origin are to be implicitly believed. स्मृति is an authority only when श्रुति is silent or not inconsistent (विरोधे त्वनपेक्षं स्यादसति ह्यनुमानं). * इतिहास and पुराण are of comparatively slender weight and are brought into requisition only when no higher authority is to be found.

The authority of the Vedas.

2. The two-fold division of a वाक्य into sacred and profane is chiefly made for the purpose of implying that the rules laid down in the preceding three sections apply to लौकिक वाक्य only ; but the unquestioned authority of the वैदिक वाक्य is not therefore inconsistent with them, since all the conditions of validity implied by them are taken for granted in the case of the *Vedas*.

T. D. here refers to two points which have long served as good bones of contention between *Mîmâṁsakas* and *Naiyâyikas*. The first is whether the *Vedas* are eternal or are special compositions by God. It must be remembered that there is no question here as to the human origin of the *Vedas*, since both the schools, being orthodox, agree in repudiating the notion of the *Vedas* being human creations like any other book. The word पौरुषेय which frequently occurs in this controversy solely refers to God ; while अपौरुषेय means eternal, having no author at all. The *Mîmâṁsakas* claim eternity for the *Vedas* on two grounds ; first, no tradition is known ascribing the authorship of the *Vedas* to any individual, the several Rishis mentioned as ' seers of hymns (मन्त्रद्रष्टारः)' having only *seen* the hymns and not *composed* them.

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* *Jaimini ; Mimâṁsâ-Sûtras.* I, 3, 3,

On the other hand we know the authorship of all human productions, as अष्टादशपुराणानां कर्ता सत्यवतीसुतः. Secondly, the *Vedas* themselves declare their own नित्यत्व in several texts, such as 'वाचा विरूपनित्यया,' 'अस्य महतो भूतस्य निश्वसितमेतद्यदृग्वेदो यजुर्वेदः.' The *Naiyâyika* meets these arguments by contrary texts, such as तस्मात्तेपानात्त्रयो वेदा अजायन्त, and 'इदं सर्वमसृजत ऋचो यजूंषि सामानि.' Their strongest weapon however is the अनुमान, वेदः पौरुषेयो वाक्यत्वाद्भारतादिवत् , or वेदवाक्यरचना वक्तृयथार्थवाक्यार्थज्ञानपूर्वा, वाक्यरचनात्वात्, अस्मदादिवाक्यरचनावत्. The *Mîmâmsakas* try to refute this argument by calling it सोपाधिक, the उपाधि being स्मर्यमाणकर्तृकत्व; that is, they mean that the above reasoning is applicable only to those works whose authorship is known. The *Naiyâyikas* answer that even the authorship of the Vedas was known since it was remembered by *Rishis* like *Gotama* by the tradition of teaching. Besides if the *Vedas* had been eternal, all the words and letters in them would be co-existing, and so there would be no order of words (वर्णानुपूर्वी) etc., without which there can be no आकाङ्क्षा and no शाब्दबोध. The *Vedas* therefore must have been produced by some one, and as no human origin is possible in the case of works containing such transcendental wisdom, they must be the work of God. The *Vedântin*, who is eminently a compromiser, tries to reconcile these opposite views, by supposing that the *Vedas* as they exist at present are अनित्य, but they are merely copies of similar compositions existing in the previous cycles, the authority for this opinion being the text, धाता यथा पूर्वमकल्पयत्. This in short means that the *Vedas* are eternal as to substance (अर्थ), but non-eternal as to form (आनुपूर्वी).*

Non-eternity of sound.

3. The question of the eternity of the Vedas is involved in the larger question whether sound is eternal. Sound is a quality of *Âkâśa* and is eternal like it, भेरीदंडसंयोग and other accidental causes only serving to reveal it to our ears. We always recognize the letter ग as the same, and so it connot vanish away the moment it is pronounced. The *Naiyâyikas*

**Ved. Par.* Calc. ed. p. 21.

prove the non-eternity of sound by अनुमान thus:—शब्दोऽनित्यः। सामान्यवत्त्वे सति बहिरिन्द्रियजन्यलौकिकप्रत्यक्षविषयत्वात्, लौकिकप्रत्यक्ष-विशेष्यत्वाद्वा । घटवत्. *Gotama* gives three reasons for the non-eternity of sound: —1 that it has a beginning, 2 that it is perceived by organ of sense, and 3 that the attributes of a product are ascribed to it.* The identification of one गकार with a former one can be accounted for by similarity just as we identify one lamp-flame with another that formerly stood in its place.

SECT. LXIII. शाब्दम्

Verbal knowledge means the knowledge of the meaning of a sentence; its proximate cause is the Word.

The proximate cause of verbal knowledge.

1. *Annambhatta* winds up the discussion of शब्द by the declaration that it is the knowledge of the meaning conveyed by the whole sentence which is the real *verbal knowledge*, that is, the फल, mentioned above as the fourth kind of *apprehension*. The special cause of this फल is the शब्द or the sentence which conveyed that sense. This emphatic declaration seems to be made in order to repudiate the view of the modern *Naiyâyikas*, that it is not the पद but the पदज्ञान that is the real करण of शाब्दबोध. *Viśvanâtha* who prefers the modern view says in B. P. 80:—

पदज्ञानं तु करणं द्वारं तत्र पदार्थधीः ।
शाब्दबोधः फलं तत्र शक्तिधीः सहकारिणी ॥

He then goes on in his commentary न तु ज्ञायमानं पदं करणम्, पदाभावेऽपि मौनिश्लोकादौ शाब्दबोधात्.† If the word itself be taken as the करण of शाब्दबोध, how do we understand a verse written by a dumb man without uttering a single word ? It is therefore the knowledge of the word, whether heard orally or seen in writing, that really produces the शाब्दबोध. The distinction is prac-

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* G. S. II, 2, 14.

† S. M. Calc. ed. p. 78.

tically unimportant, although it has great historical significance, since it marks the stage when, writing having come to take a large place previously occupied by oral tradition, the absurdity of defining शब्द in terms of actual utterance was perceived and the difference between writing and oral tradition was abolished. Apparently *Annambhatta's* opinion differs from both the above views, since he makes शब्द the करण and defines शब्द as a वाक्य or पदसमूह and not a पद. But this is not so, because according to *Naiyâyikas* a पदसमूह is not different from its components, the several पदs. Perhaps by शब्द *Annambhatta* may be meaning शब्दज्ञान or पदज्ञान, just as in a former section he interpreted आकाङ्क्षा etc. as आकाङ्क्षादिज्ञान; and if this is the case his view will agree with the modern one. At any rate his laxity of expression on this point shows that he did not regard the distinction as very material.

Why word is separate proof.

2. T. D. here briefly notices the argument of the *Vaiśeshikas*, who recognize only two proofs, *Perception* and *Inference*, *viz.* that *Word* is not a distinct proof as it can be included under *Inference*. The syllogism by which the connection (संसर्ग) between a word and its sense is to be known may be stated either as T. D. puts it, or as एते पदार्थाः परस्परसंसर्गवन्तः । आकाङ्क्षायोग्यतासत्तिमत्पदस्मारितत्वात् । दण्डेन गामानयेतिपदस्मारितपदार्थवत्; that is, the पक्ष in the inference may be either the पद as T. D. makes it, or the पदार्थ as is done in the syllogism given here. Either way, the inference is incapable of producing शाब्दबोध, for the knowledge conveyed by words is of an altogether distinct kind from that imparted by an inference, and besides produces the consciousness, 'I know from words,' which differs from the consciousness 'I know by inference.' This is not a very satisfactory reply since it rests on self-consciousness which may vary with different persons. *Udayanâchârya* gives a more convincing refutation of the *Vaiśeshika* view:—अनैकान्तः परिच्छेदे संभवे च न निर्णयः ।* An inference like the above is impossible ; for the

* *Kus.* Cowell's ed. III, 13.

conclusion of it can only be a certainty (परिच्छेद) or a mere possibility (संभव); if it is the former the syllogism involves an अनैकान्तिक हेत्वाभास as a certain conclusion is not warranted by the premises; while if the latter, there is no ascertainment (सिद्धि) of the साध्य, and consequently no शाब्दबोध. Hence शब्द must be recognized as a distinct proof, producing a cognition of a peculiar sort.

Other proofs.

3. The description of the four proofs is concluded here, and the rest of the passage in T. D. discusses two points having reference to the whole chapter on 'proofs.' The first point is whether the four proofs, hitherto described, exhaust the number of valid proofs. The variety of opinions on this head amongst the different schools is almost perplexing. The total number of proofs thus recognized by one or more schools is ten, namely, 1 प्रत्यक्ष (Perception), 2 अनुमान (Inference), 3 उपमान (Comparison), 4 शब्द (Word), 5 अर्थापत्ति (Presumption), 6 अनुपलब्धि (Non-perception), 7 संभव (Inclusion), 8 ऐतिह्य (Tradition), 9 चेष्टा (Sign), and 10 परिशेष (Elimination). Of these each of the known philosophical schools recognize only a particular number varying from one to ten. Thus, the *Chârvâkas* or Atheists accept only, *Perception*, repudiating the validity of all the rest; the *Vaiśeshikas*, the *Bauddhas* and the *Jainas* accept two, *Perception* and *Inference*; the *Sânkhyas*, *Yogins*, Lawyers, and a section of *Vedântins* accept three, the above two with *Word*; the *Naiyâyikas* add a fourth, *Comparison*; the *Mîmâṁsakas* and some *Vedântins* accept two more, *Presumption* and *Non-perception*; the *Paurâṇikas* or Mythologists add further *Probability* or *Inclusion*, and *Tradition*; while the ninth, *Sign*, is recognized by *Tântrikas* only. *Elimination* also, though only a species of inference, is regarded as a distinct proof by some *Mîmâmsakas*. *Annambhaṭṭa* having accepted the *Naiyâyika* doctrine of four proofs disposes of the rest by short references. संभव, ऐतिह्य and चेष्टा are easily disposed of by including the first

in अनुमान and the latter two in शब्द. *Non-perception* has been already discussed under a previous section* and declared to be only an accessory to the *perception* of *negation.*

4. The severest contest lies round अर्थापत्ति. The *Naiyâyikas* strenuously try to include it in Inference, while the *Mîmâmsakas* as strenuously maintain that it is an independent proof. The stock example of अर्थापत्ति is पीनो देवदत्तो दिवा न भुङ्क्ते । अर्थात् रात्रौ भुङ्क्ते । '*Devadatta* being fat does not eat in daytime; and so he must be eating at night.' Night-eating is thus *presumed* on the ground of the known impossibility of remaining fat without eating, unless of course as *Nîlakantha* suggests, the fatness is due to disease or superhuman power. The exceptions of course need not be taken into account here. This अर्थापत्ति which is advocated by *Prâbhâkara Mîmâṁsakas* is of two kinds, दृष्टार्थापत्ति and श्रुतार्थापत्ति. When the knowledge देवदत्तो दिवा न भुङ्क्ते on which the presumption is based is obtained by actual sight, it is the first; when it is got by hearsay from another person it is the second. Both these kinds of अर्थापत्ति are included by *Naiyâyikas* in अनुमान. The inference is of केवलव्यतिरेकि kind, देवदत्तो रात्रिभोजनकर्ता, दिवाभुञ्जानत्वे सति पीनत्वात्, यन्नैवं तन्नैवं यथा रात्रावभोजी यज्ञदत्तः । *Presumption* is therefore not a separate proof, for all cases of it are accounted for by केवलव्यतिरेकि अनुमान. The difference between *Nyâya* and *Mîmâmsa* views on this point is only of लाघव and गौरव. The *Mîmâṁsakas* recognize a fifth proof अर्थापत्ति to account for all kinds of presumptions and thereby dispense with the केवलव्यतिरेकि inference, while the *Naiyâyikas* accept the latter and repudiate अर्थापत्ति. The dispute between them is therefore reduced to the question which view has लाघव on its side; that is, whether it is simpler to recognize a new proof or a new variety of inference. Apparently the *Naiyâyikas* have the better of it; but if we take into account the difficulties and absurdities into which the *Naiyâyakas*

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* Vide T. D. on Sect. 43 and Note 8 thereon, p. 228 *Supra*.

have involved themselves by their recognition of केवलव्यतिरेकि लिङ्ग, we cannot certainly commend them for their apparent 'simplicity.'

The validity of knowledge.

5. The second point noticed by T. D. is of the utmost importance, as it in fact lies at the very root of the whole theory of proofs. We see a jar and have the cognition अयं घटः or घटमहं जानामि; but how do we know that we really see the घट, and that our perceptive knowledge is not a mis-apprehension of something that is not घट? That is, how do we in practice distinguish a प्रमा from भ्रम? We may or we may not see the reality of घट, but what test is there to prove that we see the reality and not a shadow? A प्रमा has been defined as तद्वति तत्प्रकारकं ज्ञानं 'knowledge of a thing possessing any property as possessed of that property.' It is thus comparatively easy to define what प्रमा is; but how are we to ascertain whether a given piece of knowledge is a प्रमा or अप्रमा? The necessity of this ascertainment is obvious, for without it there can be no certainty of knowledge and all human intercourse would be impossible. The question therefore how to determine the truth of our cognitions becomes a necessary corollary to any theory of knowledge.

6. The question is resolved into the alternative whether right knowledge is स्वतःप्रमाण 'self-proved' or परतःप्रमाण 'proved by something else.' *Mâdhavâchârya* quotes two verses which summarize the four principal veiws on this point:—

प्रमाणत्वाप्रमाणत्वे स्वतः सांख्याः समाश्रिताः ।
नैयायिकास्ते परतः सौगताश्चरमं स्वतः ॥
प्रथमं परतः प्राहुः प्रामाण्यं वेदवादिनः ।
प्रमाणत्वं स्वतः प्राहुः परतश्चाप्रमाणताम् ॥*

"Of the two things 'authoritativeness' (प्रामाण्य) and 'non-authoritativeness' (अप्रामाण्य), the *Sâṅkhyas* consider both to be self-proved; the *Naiyâyikas* hold both to be known extern-

* *Sarv. D. S.* Calc. ed. p. 129.

ally; the *Bauddhas* think that 'non-anthoritativeness' is self-proved but the other is proved externally. Lastly, teachers of the *Vedas*, *i. e.* the *Mîmâmsakas* maintain that प्रामाण्य is self-proved but अप्रामाण्य requires external proof." This diversity of opinions about प्रामाण्य may be stated briefly by saying that according to *Sânkhyas* both the truth and falsity of a cognition are known intuitively; according to *Naiyâyikas* both are proved by independent reasoning and therefore neither can be presumed until thus proved; according to *Bauddhas* a cognition is *prima facie* incorrect and true if only proved to be so by special evidence; while the *Mîmâmsakas* regard a cognition as presumably correct, but false when actually proved to be so. As we are mainly interested in determining प्रमात्व only, the contest chiefly lies between the *Naiyâyika* view of परतःप्रामाण्य and the *Mîmâmsâ* doctrine of स्वतःप्रामाण्य. T. D. first states the *Mîmâmsâ* view fully as a पूर्वपक्ष, and then refutes it in order to establish the सिद्धान्त of *Nyâya* that the truth of knowledge is proved externally.

7. The स्वतस्त्व of प्रामाण्य is defined, तदप्रामाण्याग्राहकयावज्ज्ञानग्राहकसामग्रीग्राह्यत्वम्, 'the property of being apprehended by the same entire body of the means which produce the knowledge, but do not prove its falsity.' Three conditions are implied in this definition, that the truth of knowledge is apprehended by the same means which produce the knowledge, that the means include every thing that is instrumental in producing the knowledge, and that they should not include anything that affects the truth of the knowledge. The necessity of the two latter qualifications is shown by T. D. The definition speaks of the totality of means in order to include an inference that may be sometimes used to prove प्रामाण्य, although it may have been previously known by आप्तवाक्य; and it excludes a contrary cognition इदं ज्ञानमप्रमा which, being बाधक, may prevent the apprehension of प्रामाण्य, provided of course this contrary cognition arises with reference to the knowledge itself and not to the subsequent अनुव्यवसाय. Besides, the *Naiyâyikas* themselves in a way assent to स्वतःप्रामाण्य,

since, as they go so far as to accept that घट, घटत्व as well as the संबन्ध of the two, are cognized by अनुव्यवसाय, they should have no difficulty in accepting the cognizability by the same अनुव्यवसाय of the respective knowledge of those things. The *Naiyâyika* however rejects this last view, *viz.* that अनुव्यवसाय cognizes घट, घटत्व as well as their संबन्ध, and then refutes the whole पूर्वपक्ष. The chief objection of the *Naiyâyika* against स्वतःप्रामाण्य is that it leaves no room for the possibility of a doubt, which as a matter of fact we often feel, whether a certain cognition is true or not. If the प्रामाण्य is intuitive and is known along with the cognition itself, such a doubt can never arise. The validity of any cognition is therefore determined by a subsequent केवलव्यतिरेकि inference which is based on the intervening actual experience of the thing. Thus first we *believe* we see water ; then this *belief* produces इच्छा (for the water), which produces प्रवृत्ति (towards it). This प्रवृत्ति is satisfied if the water really exists there, but not if it is simply a mirage. Hence the satisfaction of प्रवृत्ति is a proof of the reality of our perception ; that is, the truth of our perception is determined by external evidence. Similarly the truth of words is ascertained by their being यथार्थ, *i. e.* being in harmony with external things.

8. The advocates of परतःप्रामाण्य think that a प्रमा is produced by the presence of some positive गुण, which varies with the nature of the प्रमा, that is, in perception it is विशेषणवद्विशेष्यसंनिकर्ष and so on; while an अप्रमा is caused by the presence of some दोष such as distance, defective sight etc.* According to the other side, no positive गुण is required for प्रमा but simple दोषाभाव is quite sufficient. The chief objection of स्वतस्त्ववादी against the *Naiyâyika* view is that if the truth of one cognition is to be determined by an extra inference, the validity of that inference again will have to be ascertained by a third inference, and so on *ad infinitum*. In this way there will

be no certainty of knowledge* It is unnecessary to enter further into this interesting but endless controversy. The reason why it was persued with so much vigour on both sides seems to be its important bearing on the question of the authority of the *Vedas*. If शब्द् is स्वतःप्रमाण as the *Mîmâmsakas* held, the truth of the *Vedas* was self-evident, and they required no external sanction to prove their claim to unflinching obedience; while if शब्द् was परतःप्रमाण, the *Vedas* required some external proof of their authority, such as the fact of their being composed by Omniscient God. The *Bauddhas* denied the authority of the *Vedas* altogether, while the *Naiyâyikas* made it dependent on God's authorship. This may be one reason why the *Naiyâyikas* and *Vaiśeshikas* were termed by their more orthodox rivals, अर्धवैनाशिकs or *Semi-Buddhists*.

9. T. D. incidentally notices another doctrine of the *Prâbhâkara* school of *Mîmâmsakas* that all knowledge is true (of course so far as it goes), and consequently the distinction between प्रमा and अप्रमा is unfounded. If प्रवृत्तिजनकत्व is the test for the reality of knowledge, then the erroneous apprehension of silver on mother-o'pearl also sometimes produces a प्रवृत्ति, and will therefore be प्रमा while that प्रवृत्ति can be fully accounted for by the recollection of the formerly-seen silver and the *percept* of the object present. This cannot be, says the *Naiyâyika*; because there is much लाघव in ascribing प्रवृत्तिजनकत्व to the actual प्रमा itself. The erroneous apprehension of silver on शुक्ति may appear to be true so long as it lasts, but it is not प्रमा, because it is not तद्वति तत्प्रकारक ज्ञान.

Sect. LXIV. अप्रमा.

Wrong appehension is of three kinds, doubt, error and false assumption. Doubt is the apprehension of various contrary properties in one object, e. g. Is it a post or a man? Error is false knowledge, as silver in a conch-shell. False assumption is the deduction of a wider thing by the wrong hypothesis of a narrow one, e. g. if there be no fire there would be no smoke.

1. Having treated यथार्थज्ञान, the author in the present section enumerates the varieties of अयथार्थानुभव 'wrong apprehension' because to

Wrong knowledge.

* For a fuller discussion see *Sarva* D. S. Calc. ed. pp. 129-32, and *Ved. Par.* Calc. ed. P. 27.

understand *true apprehension* fully we also require a knowledge of its opposite *misapprehension*. अयथार्थानुभव is already defined as "the cognition of a thing as possessed of an attribute which in fact it does not possess."* It has been well said that truth is one, but falsehood is various. Hence the definition of अयथार्थज्ञान contains no restriction as to certainty. *Misapprehension* may therefore be first divided into Certitude (निश्चय or भ्रम) and In-certitude (संशय). Certitude again may be either conscious or unconscious, that is, it may either have been voluntarily and purposely assumed (आहार्य), or it may have been caused by some adventitious circumstance called दोष (अनाहार्य). The first is called तर्क and is assumed with a full consciousness of its falsity; the second is called विपर्यय or विपर्यास and is involuntary. संशय or doubt is always involuntary (अनाहार्य), because as soon as the error is perceived it is at once dispelled.

Varieties of misapprehension.

Thus *Misapprehension* naturally splits into three kinds: Doubt, Error and False Assumption or Hypothesis. Some include तर्क in विपर्यय for the obvious reason that though voluntarily made on the part of one of the two disputants it does not essentially differ from any other kind of *error*; but *Annambhaṭṭa* gives prominence to it by mentioning it separately, because although invalid itself it is often useful in argumentation and assists the valid proofs in obtaining right knowledge. Dream, says T. D., is included under विपर्यय, while the fallacies of inference already mentioned will also fall under the same head.

Doubt.

2. *Doubt* is defined as "the knowledge of various contrary properties in one and the same object." The propriety of each of the three limitations एकस्मिन् धर्मिणि, विरुद्ध and नाना, is explained by T. D. *Doubt* has three characteristics, that the knowledge must be of several properties,

that they must be irreconcilable with one another, and that they must be apprehended in the same thing. The definition however is not quite satisfactory, for it contains the word विरुद्ध which is not very easy to define. There is no certain test to determine what properties are contrary to one another and what not. Roughly we may say that those which are never observed together as existing in one object are irreconcilable. For example, अश्वत्व and मनुष्यत्व are, one might say, विरुद्ध because they are never observed together; but suppose a centaur which is half-man and half-horse is actually found on earth, then they will no longer be विरुद्ध. Besides even supposing that they are विरुद्ध properties and that a centaur does not really exist, the definition of संशय would still apply to the imaginary notion of a centaur which is undoubtedly a knowledge of several contrary properties in one thing. This last objection may however be answered by saying that a centaur being wholly an imaginary being there is no धर्मी on which the contrary properties are to be imposed. A better definition is एकस्मिन् धर्मिणि विरुद्धनानाकोटिकं ज्ञानम्. कोटि is an alternative, and the contrary कोटिs are the property and its negation. Thus when we have a doubt शब्दो नित्यो न वा, नित्यत्व is one कोटि and अनित्यत्व is the other; and the संशय is said to be द्विकोटिक. When we have a doubt अयं स्थाणुर्वा पुरुषो वा, it is चतुष्कोटिक; for there we have four possible cases अयं स्थाणुः, अयं न स्थाणुः, अयं पुरुषः and अयं न पुरुषः.

Error and argument by Reductio ad absurdum.

3. विपर्यय (Error) is of course any false notion, and is the *mis-apprehension* proper. तर्क *Reductio ad absurdum* requires some explantion. The definition of तर्क in the text is rather vague. Literally it signifies the imposition of a more extensive thing through the assumption of the less. The example given is however quite misleading. वह्न्यभाव is व्याप्य and धूमभाव is व्यापक; therefore we assume the existence of वह्न्यभाव and deduce from it by means of a regular syllogism the existence of धूमाभाव, as in the sentence यदि वह्निर्न स्यात्तर्हि धूमोऽपि न स्यात् which implies that वह्न्यभाव necessarily leads to धूमाभाव. This is called व्याप्यारोपेण व्यापकारोपणम्, and this according to *Annambhatta's* definition would be तर्क. But no one can say that the pro-

position, 'वह्न्यभाव necessarily leads to धूमाभाव,' is a *misapprehension*, since it is perfectly correct and does nothing more than express the वह्निव्याप्यत्व of धूम negatively. As a matter of fact the proposition only expresses the व्याप्ति by which the conclusion, denominated तर्क, is arrived at. Properly speaking तर्क is neither the process of hypothetical reasoning in which a false conclusion is deduced from a wrongly assumed hypothesis (as some have erroneously supposed), nor is it the व्याप्ति on which such conclusion is based, as *Annambhaṭṭa's* illustration has led others to believe. Such a mistake seems to have been committed by Roer who translates तर्क by 'discussion,'* and by Ballantyne who translates *Annambhaṭṭa's* व्यापकारोपः by "consists in establishing the pervader etc."† आरोप is not the *act* of आरोपण but the conclusion that is आरोपित, namely, अत्र (पर्वते) धूमो नास्ति. This conclusion which is called तर्क is false, because it is contradicted by our actual perception of smoke on the mountain.

4. The process of arriving at this *Reductio ad absurdum* conclusion is this. Suppose one observes smoke on the mountain and wishes to infer fire from it. He thereupon declares the प्रतिज्ञा and हेतु, पर्वतो वह्निमान् धूमात्, and then states the अन्वयव्याप्ति, यत्र यत्र धूमः etc. But his adversary may not admit the व्याप्ति to be correct. How is he then to proceed? He cannot infer fire from smoke, unless the *invariable concomitance* of the two things is accepted by the adversary. He therefore resorts to the reverse process of reasoning called *Reductio ad absurdum*, in which he grants, for the sake of argument, the groundless contention of his adversary, namely, that the mountain is not fiery, and deduces from it by a regular and correct syllogism, a conclusion (Mountain has no smoke) which is palpably absurd as it is directly contradicted by the observed fact of smoke. And the absurdity of this conclusion of course proves the absurdity of the hypothesis from which it was deduced, namely, the contention of the adversary. In order to do this he begins by asking पर्वतो

वह्निमान् न वा. If the former alternative is accepted, then of course his conclusion is admitted, and he need not proceed; but if the adversary accepts the latter, then he goes on:—यदि पर्वतो वह्निमान् न स्यात् तर्हि स धूमवानपि न स्यात्. If the adversary questions this he is at once asked to produce an instance where smoke is found in the absence of fire; but this he cannot do since धूम being the कार्य of वह्नि can never exist apart from it. The adversary is therefore forced to accept the व्याप्ति, यत्र यत्र वन्ह्यभावस्तत्र धूमाभावः। Now his assumption is पर्वतो वह्न्यभाववान्; therefore he reasons पर्वतो धूमाभाववान्। वह्न्यभाववत्त्वात्। यत्र यत्र वन्ह्यभावः etc. Thus he gets at the conclusion पर्वतो धूमाभाववान्; but this must be false as it is directly opposed to the observed fact पर्वतो धूमवान्. The assumption therefore from which this absurd conclusion is derived, namely पर्वतो वह्न्यभाववान्, must be false, and its contradictory, पर्वतो वह्निमान् must be true. Here the speaker first imposes or assumes the existence of व्याप्य *i. e.* वह्न्यभाव on the mountain, and from that (आरोपेण) deduces the existence of व्यापक *i. e.* धूमाभाव, both of which impositions being false are properly termed आरोप. The deduced आरोप, namely the absurd conclusion, is called तर्क. The real sense of *Annambhatta's* definition is thus brought out in *Nîlakaṇṭha's* paraphrase, आहार्यव्याप्यवत्ताभ्रमजन्य आहार्यव्यापकवत्ताभ्रमस्तर्कः, that is, an obviously wrong notion as to the existence of व्यापक on the पक्ष, derived from a similar palpably wrong assumption of the existence of व्याप्य in the same place.

5. The तर्क differs from विपर्यय in being formed by one who knows its falsity, while it differs from a बाधित अनुमिति in being only subsidiary to the establishment of its contradictory. Ancient *Naiyâyikas* mentioned eleven kinds of तर्कs, of which the moderns accept only five, viz. आत्माश्रय (*Ignoratio Elenchi*), अन्योन्याश्रय (*Dilemma*), चक्रक (*Circle*), अनवस्था (*Regressus ad infinitum*) and प्रमाणबाधितार्थप्रसङ्ग (*Reductio ad absurdum*). The example usually given comes under the last head, while the first four are only varieties of सव्यभिचार and असिद्ध fallacies framed in particular forms. The तर्क or केवलव्यतिरेकि अनुमान is very useful in proving

things which cannot be proved by positive inference, and is particularly indispensable in theological discussions. Religious commands which transcend our limited reason can be justified only by such special arguments; Manu therefore says:—

आर्षं धर्मोपदेशं च वेदशास्त्राविरोधिना ।
यस्तर्केणानुसंधत्ते स धर्मं वेद नेतरः ॥ (M. S. XII. 106).

In matters of religion which are above and beyond positive human experience तर्क or contrary inference is often the only method available to satisfy the inveterate doubter or silence a persistent adversary. Kant had to assume a separate faculty of Intuition to account for all such extra-sensuous knowledge. *Naiyâyikas* solved the difficulty by adopting तर्क inference.

Sect. LXV. स्मृतिः

Remembrance also is of two kinds: true and false; the one arising from true cognition is true, that arising from false cognition is false.

Right and wrong Remembrance.

1. स्मृति (Remembrance) has been already defined in Section 34. After treating of the two kinds of *apprehensions*, true as well as false, the author announces a similar division of *Remembrance*. But the *fundamentum divisionis* is different in this case. अनुभव is true or false according as it does or does not correspond to the object as it exists externally; while the truth or falsity of स्मृति is made to depend entirely on the truth or falsity of the अनुभव from which it originates. A remembrance which springs from *right apprehension* is right, and that which springs from *wrong apprehension* is wrong. The reason of this difference of tests for अनुभव and स्मृति probably lies in the fact that स्मृति being a mediate knowledge is not directly connected with external objects. Besides a

place from the first *apprehension*, and consequently the test of प्रामाण्य applicable to all first-hand cognitions, namely the inference based on actual verification of the external object, is generally not available in the case of स्मृति. When we believe we see water, we can at once verify the truth of our perception by touching or drinking the water; but when we only remember to have seen water some time back and at a distant place, it is obviously impossible for us to go to the place and verify the truth of our स्मृति. Hence a different test of truth is applied to स्मृति, a test, by the way, recognized in the case of all mediate cognitions, namely, the correctness or incorrectness of the original notions which produce them. Thus the validity of an अनुमिति depends on the validity of the परामर्श, while the truth of शाब्दबोध depends on the correct knowledge of the वाक्य. Similarly the truth of स्मृति also depends upon the truth of the original अनुभव. But there is one drawback to this method. Suppose the original अनुभव was true but the impression left by it is distorted or partially effaced by lapse of time; then the remembrance will be obviously mutilated and false, although the apprehension itself was right. Or suppose both the apprehension and the impression were good, but owing to some accidental cause, such as a want of proper उद्बोधक or the presence of any obstruction or inattention, the remembrance does not fully agree with the अनुभव; yet it cannot be प्रमा. Again dreams are supposed to be स्मरणात्मक and are often produced by actual experience of the things perceived; why are then all dreams false? These objections can be answered by saying that every स्मृति requires to be verified if not with external objects, at least with true cognitions of those external objects.

SECT. LXVI—LXXII. सुखादयो गुणाः

What is experienced by all with agreeable feelings is Pleasure.

What is experienced by all with disagreeable feelings is Pain.

Desire is yearning.

Aversion is irritation.

Action is effort.

Merit is the product of enjoined actions.

Demerit is the product of prohibited action.

1. Sections 66 to 72 contain short definitions of the next seven qualities. The group consists of three pairs of co-related qualities, namely सुखदुःख, इच्छाद्वेष, and धर्माधर्म, and one single quality प्रयत्न. The two qualities which form each a pair, though co-related, are not contradictories of each other; but both are positive qualities of opposite kinds.

Pleasure and Pain

2. सुख (Pleasure) is defined in the text, as 'that which is experienced by all with agreeable feelings', while दुःख (Pain) is ' that which is experienced with disagreeable feelings. ' They are not *absolute negations* of each other, and may often co-exist, as when a king enjoys much pleasure together with occasional grief. The definitions of सुख and दुःख given in the text seem to be faulty, and are therefore replaced by better ones in the commentary, for, as *Nîlakaṇṭha* remarks, मूलं सुखादिलक्षणपरं न संभवाति, परद्रव्योपभोगादिजन्यसुखे साधूनां द्वेषदर्शनादव्याप्तेरित्यांशंकायां सुख्यहामित्यादिप्रत्यक्षप्रसिद्धं सुखत्वादिकमेव लक्षणम्. It is unphilosophical to label once for all certain external objects as सुखकारक and certain others as दुःखजनक, for the same thing may be pleasurable to one man and painful to another. The best criterion in this case is therefore the individual experience of each man (सुख्यहमित्यनुव्यवसाय :). But the question again arises what kind of individual experience is pleasurable and what is painful. Hence more elaborate definitions of सुख and दुःख are given, like those in N. B. सुख, says N. B., is इतरेच्छानधीनेच्छाविषय, that is, pleasure is desired for its own sake and not for the purpose of satisfying the desire of some other thing ; or in other words pleasure is the ultimate aim of all our acts and is not a means to some other end. Similarly pain is the object of

aversion in itself, and not because it causes the aversion for any other thing.

3. इच्छा and द्वेष, *desire* and *aversion*, are respectively defined as 'wishing' and 'irritation.'

Desire and aversion.

4. प्रयत्न or *effort* is not the actual act, but rather the readiness of the mind coupled with an attempt towards performing that act, as when a dying person makes an *effort* to speak, but cannot do so owing to a failure of his powers. प्रयत्न or कृति as it is sometimes called is therefore best rendered by *effort*, or *volition*.

Effort

5. धर्म (*merit*) and अधर्म (*demerit*) are the two varieties of अदृष्ट (*Destiny*), and imply two positive things popularly known as पुण्य and पाप respectively. *Merit* is that which is produced from acts enjoined by *Śruti*, while *demerit* is produced from the doing of prohibited acts. For example, the Vedic text ज्योतिष्टोमेन स्वर्गकामो यजेत is a विधि, and therefore the performance of a ज्योतिष्टोम sacrifice would produce *merit*; while न कलञ्जं भक्षयेत् being a निषेध the eating of कलञ्ज fruit would produce *demerit*.

Merit and Demerit.

SECT. LXXIII and LXXIV. आत्मगुणाः

The eight qualities, cognition etc. are special attributes of soul only.

Cognition, desire and effort are of two kinds: eternal and non-eternal; eternal belong to God, non-eternal to human soul.

1. The eight qualities from बुद्धि to अधर्म are the special characteristics of soul only, *i. e.* they are subjective as opposed to other qualities which have objective or external existence. They are also co-related to one another as cause and effect, and are mentioned in that order. Each of these in fact is the effect of the immediately preceding and the cause of the next following. बुद्धि *Cognition* is of course the foundation of all internal experiences. Of these सुख and दुःख

are the ultimate objects to be desired or avoided. The notions of pleasure and pain respectively produce corresponding desire (इच्छा) or aversion (द्वेष) for their means. This desire or aversion gives rise to an effort (प्रयत्न) directed towards obtaining or avoiding those means. Good and bad efforts produce merit and demerit respectively; while these last produce a संस्कार on the mind, which संस्कार becomes when ripened the cause of a succession of births.

2. विशेषगुणs or special qualities are enumerated in the verse quoted on p. 86 *supra*. Out of these eight *i. e.* the six, intellect, pleasure, pain, desire, aversion and effort, and *Adṛishta* or fate including both merit and demerit are the special qualities of Soul only. The significance of मात्र, only, is that these qualities reside in Soul alone and nowhere else, while the other special qualities are found in other substances. A विशेषगुण is defined by T. D. in the next section as a quality that resides in one substance only at a time and not in two or more substances conjointly, such as number etc. See, p. 87., *supra*.

SECT. LXXV. संस्कारः

Faculty or Impulse is of three kinds: Velocity, Mental impression and Elasticity.

1. संस्कार or *Faculty* is almost undefinable, as may be guessed from the truism given by T. D. The reason of it seems to be that its three varieties are so incongruous and different in nature that no general definition can be equally applicable to all. The wonder rather is how these irreconcilable things came to be classed under one head. S. C. gives a definition which is only a little better: सामान्यगुणात्मविशेषगुणोभयवृत्तिगुणत्वव्याप्यजातिमान्, 'that which has a जाति (संस्कारत्व) which is next below गुणत्वजाति and which resides in both the *general* qualities and the *special* qualities of Soul.' The qualities are sharply divided into two classes, *general* and *special*, but संस्कार is the only quality which is common to both, since two of its varieties, *Velocity* and *Elasticity* go under *general* qualities, while the third called भावना or

mental impression is the *special* quality of Soul. Another and perhaps a still better definition of संस्कार is given by *Tārkika-Rakshā* :—यज्जातीयः समवायस्तज्जातीयस्य कारणम् । स्वयं यस्ताद्विजातीयः संस्कारः स गुणो भवेत् ॥ "A property which produces an effect from a cause of the same kind, although it is itself dissimilar." This means that whenever a quality or action in a thing is repeated or produces effects exactly similar to itself by some internal force and without external agency, the internal force is called संस्कार.

Faculty is of three kinds.

2. The three varieties of संस्कार are वेग (*Velocity*), भावना (*Mental impression*) and स्थितिस्थापक (*Elasticity*). The first is said to reside in the five corporeal (मूर्त) substances only, namely, earth, water, light, air and mind; and the reason is obvious, for there can be no *velocity* or motion unless the thing has a limited dimension. भावना is simply defined as that impression which is born of अनुभव and becomes the cause of remembrance. स्थितिस्थापक or *Elasticity* is that power or force which brings a thing back to its normal shape or condition whenever it is distorted. *Elasticity* is found in earthy things such as a mat. The several remarks of T. D. have been already explained in their proper places, and so need not be noticed here. Of these three varieties भावना alone deserves the name of संस्कार, and is generally referred to by that word. The other two are common properties of all material things, and can be termed संस्कार only by a very far-fetched analogy. Ballantyne thinks that the similarity of the three varieties of संस्कार consists in the thing acting *by itself* without an impulse from an external agent. The explanation is plausible, though not quite convincing. संस्कार is therefore an impulse inhering in the very thing in which a property reproduces itself. This is at best the only characteristic wherein the three varieties agree.

SECT. LXXVI-LXXIX. कर्मसामान्यसमवायविशेषाः.

Action consists of motion. That which causes connection with region upwards is Tossing; that which causes connection

with region downwards is Dropping; that which causes connection nearer the body is Pulling or Contraction; that which causes connection with distant place is Rushing or Expansion. All else is motion residing only in the four substances Earth etc. and mind.

These sections treat of the remaining categories, except the last. For an explanation of them, see Notes on Sect. V. to Sect. VIII. pp. 81–99 *Supra.*

SECT. LXXX. अभावः.

Antecedent negation is without a beginning but has an end, and exists before the production of an effect. Destruction has a beginning but no end, and occurs after the production of effect. Absolute negation exists during three times, (past present and future) and has a counter-entity determined by connection (with another), e. g. there is no jar on ground. Reciprocal negation is that whose counter-entity is determined by relation of identity, e. g. a jar is not a piece of cloth.

Negation.

1. अभाव or *Negation* is defined by its very name (भावभिन्नः). As the author has already stated its four kinds, he now goes on to define each of them. '*Antecedent negation* has an end but no beginning,' while '*Consequent negation* or destruction has a beginning but no end.' The other two *negations* have neither beginning nor end. Thus the first two form one group of transient *negations*, the other two a second group of permanent ones. *Antecedent* and *Consequent negations* are spoken of with reference to a कार्य, the one representing the time before production, and the other representing the time after destruction. Thus प्रागभाव, कार्य and ध्वंस may be said to represent in order the three divisions of eternal time, past, present and future, of which the past (प्रागभाव) has no beginning and the future (ध्वंस) has no end because time itself is eternal. Between these two divisions of eternity lies the कार्य which is limited both ways, namely, by creation at one end and by destruction at the other. But suppose a

कार्य which has once been destroyed is reproduced; will not then its intermediate ध्वंस have been destroyed in its turn by the reproduction? The *Naiyâyika* answers, no; because the second कार्य, though produced from the same materials, is distinct from the first. That which was destroyed was destroyed for ever, while the new production is one which never existed before. T. D. mentions three characteristics of प्रागभाव and ध्वंस each; both reside on the *intimate* or material cause of their प्रतियोगि, *e. g.* घटाभाव resides on मृत्परमाणु; they are respectively the cause and effect of their प्रतियोगि; and they are respectively the reasons why people say of a thing that 'it will be,' or that 'it is destroyed.'

Absolute negation.

2. *Absolute negation* is 'that which is eternal and has a प्रतियोगि determined by some connection (with another thing), while *reciprocal negation* has a प्रतियोगि that is determined by the relation of identity of two things.' The qualification त्रैकालिक (भूतभविष्यद्वर्तमानवृत्तिरित्यर्थः V. V.) distinguishes अत्यन्ताभाव from प्रागभाव and ध्वंस, while संसर्गावच्छिन्नप्रतियोगिकत्व distinguishes it from अन्योन्याभाव. The name अत्यन्ताभाव may be explained by the derivation अन्तमवधिमतिक्रान्तो नित्योऽभाव इति व्युत्पत्तिः । अत एवायमात्यन्तिकस्त्रैकालिक इत्यभिधीयते.

संसर्ग is the connection by which one thing may reside on another. Thus a घट resides on its अधिकरण the भूतल by संयोगसंबंध, while गन्ध resides in earth by समवायसंबंध, each of which is called संसर्ग. Now if a jar stands on any spot of ground we say घटवद्भूतलम्, by which of course we mean संयोगसंबंधेन घटवत्; and hence even in such a case we are free to say that समवायसंबंधेन भूतले घटो नास्ति. The jar stands on the spot by संयोगसंबंध, but not by समवायसंबंध; so that although भूतल is घटवत् by संयोग it is घटाभाववत् by समवाय. Here घट is the प्रतियोगि of भूतलनिष्ठ घटाभाव, not by संयोग but by समवाय; or more briefly the प्रतियोगिता of घट is समवायावच्छिन्न. Similarly although earth possesses odour by समवाय, the गन्ध may be said to be संयोगावच्छिन्नत्वेन प्रतियोगि of पृथिवीनिष्ठगन्धात्यन्ताभाव. Whenever therefore an अत्यन्ताभाव of a thing is spoken of it

is always understood that the *absolute negation* is predicated of the अधिकरण by some particular संसर्ग. Hence अत्यन्ताभाव is defined as संसर्गावच्छिन्नप्रतियोगिताकः.

Reciprocal negation distinguished.

3. अन्योन्याभाव is distinguishable from अत्यन्ताभाव in having to depend on a different kind of संबंध. In the former a thing is प्रतियोगि of an अभाव residing in another by तादात्म्यसंबंध, and not by संयोग or समवाय as is the case with अत्यन्ताभाव. In simple language, when we speak of *absolute negation* we deny any connection between the प्रतियोगि on the one hand and the अनुयोगि that is the अधिकरण on the other; in reciprocal negation we deny only the identity of the two. When we say भूतलं घटो न, we only convey that they are not identical; but when we say भूतले घटो नास्ति, we mean something more; we convey that not only भूतल and घट are non-identical; but that they are not even connected together. अत्यन्ताभाव is the denial of a संसर्ग between two things; अन्योन्याभाव is the denial of their तादात्म्य. Thus if we say स्तम्भः पिशाचो न we deny the identity of the ghost and the post; if we say स्तम्भे पिशाचो न we deny the existence of the ghost *on* the post. The nature of the अभाव is therefore determined by the form of the denial although the idea conveyed may be the same. पटे घटत्वं नास्ति and घटः पटो न both mean the same thing; but one is an अत्यन्ताभाव, while the other is an अन्योन्याभाव.

Divisions of absolute negation.

4. S. C. divides अत्यन्ताभाव into two sorts एकपर्याप्तधर्मावच्छिन्नप्रतियोगिताकः 'that whose प्रतियोगि is a property residing in one substance as घटत्वाभाव,' and अनेकपर्याप्तधर्मावच्छिन्नप्रतियोगिताकः 'that whose प्रतियोगि is a property jointly residing in many things as द्वित्वाभाव.' But this is not the only division possible, for, as T. D. remarks, both अत्यन्ताभाव and अन्योन्याभाव will have as many kinds, as the संसर्ग and the तादात्म्य of the प्रतियोगि will be various, although the प्रतियोगि itself remains the same.

An obscure passage in T. D.

5. The sentence in T. D., explaining the multiplicity of *absolute* and *reciprocal* negations is even as corrected very obscure if not positively incorrect. It reads प्रतियोगितावच्छेदकारोप्यसंसर्गभेदादेकप्रतियोगिकयोरत्यन्ताभावान्योन्याभावयोर्बहुत्वम्. The sen-

tence will be intelligible if we take आरोप्य to mean धर्म or property. It will then mean 'that अत्यन्ताभाव and अन्योन्याभाव, though having one प्रतियोगि, are manifold owing to the variety (भेदात्) of the properties (आरोप्य) and connections (संसर्ग) that are respectively प्रतियोगितावच्छेदक in each case ; that is, the number of अन्यो० depends on the variety of प्रति०-वच्छे०-धर्म, and that of अत्य० on the variety of प्रति०-वच्छे०-संसर्ग. *Nîlakaṇṭha* interpretes the sentence in the same way. The remark appears to have been copied from a passage in *Raghunâtha Śiromaṇi's Dîdhiti*, which being more explicit may be profitably compared with it. *Raghunâtha* says एकप्रतियोगिकयोरप्यत्यन्ताभावान्योन्याभावयोः प्रतियोगितावच्छेदकधर्म-प्रतियोगितावच्छेदकसंसर्ग-भेदाद्बहुत्वम् । तत्र प्रति०—संसर्गभेदादत्यन्ताभावबहुत्वम्, प्रति०—धर्मभेदादन्योन्याभावबहुत्वमिति योजना. । * An illustration will make all this clear. The अत्यन्ताभाव of केवल देवदत्त is distinct from that of दण्डविशिष्ट देवदत्त, because the प्रतियोगितावच्छेदक in one is केवलदेवदत्तसंसर्ग and in the other दण्डविशिष्टदेवदत्तसंसर्ग. In अन्योन्याभाव there is no संसर्ग and therefore the तादात्म्य is considered with respect to properties (धर्म) residing on प्रतियोगि. Thus the अन्योन्याभाव of श्वेत घट is different from that of नील घट, because the प्रतियोगितावच्छेदक is नीलत्व in one and श्वेतत्व in the other case.

6. In conclusion T.D. notices some of the different views propounded in connection with अभाव. The *Vaiśeshikas* recognize a fifth अभाव called सामयिकाभाव 'temporary absence' in such cases as इह भूतले घटो नास्ति. The घटाभाव exists on भूतल so long as घट is absent, and vanishes as soon as it is brought there; it is not therefore त्रैकालिक and so differs from अत्यन्ताभाव. *Annambhaṭṭa* includes it in अत्यन्ताभाव, for as a matter of fact घटाभाव resides permanently on भूतल while its occasional disappearance may be explained by its being covered by घट whenever the latter is present. A rule is therefore laid down that the अत्यन्त्याभाव of घट though नित्य is manifested only when it is accompanied by either the प्रागभाव or प्रध्वंस of घटसंयोग on भूतल.

7. A writer named *Saundadopâdhyâya* introduced a new kind of अभाव called व्यधिकरणधर्मावच्छिन्नाभाव in such examples as पटत्वेन घटो नास्ति, that is, घट does not exist on भूतल in

* Bhimacharya : *Nyâya-Kosha*, 2nd ed. p. 45, note 2.

the form of पट although it may exist there as घट; but *Annambhaṭṭa* along with the majority of *Nyâya* writers considers it at the most a case of केवलान्वयि अनुमान and not a simple अभाव. As a matter of fact this variety of अभाव is recognized for dialectical purposes only and is of little use in practical life.

Negation not recognized by other systematists.

8. Opposed to the *Naiyâyikas* were the *Prâbhâkara* school of *Mîmâmsakas* (followers of *Prabhâkara* or *Guru*), who refused to recognize अभाव as a separate category existing apart from its अधिकरण. According to them and generally according to all the *Mîmâṁsakas* and *Vedântins* अभाव is only अधिकरणकैवल्यमात्रम्, 'simple substratum and nothing more.' T. D. rejects this view on the ground that it is impossible to determine what अधिकरणकैवल्य is. But if, says the *Mîmâṁsaka*, अभाव is a separate category there will be अनवस्था, for as घटाभाव is different from घट, the अभाव of घटाभाव will differ from it, and so the number of अभावs will be infinite. To remove this objection, the ancient *Naiyâyikas* regarded the second अभाव i. e. घटाभावाभाव as identical with घट. The moderns however go one step further and regard the second अभाव as distinct from both घट and घटाभाव; but the अभाव of that, namely the third अभाव was identified with the first, घटाभाव, the reason being that an अभाव being a negation can be identical with an अभाव only and never with a भाववस्तु like घट. *Annambhaṭṭa* appears to favour the ancient view.

SECT. LXXXI. उपसंहारः.

As all things are included severally in those enumerated, it is proved that there are only seven categories.

The seven-fold enumeration is exhaustive.

1. The author concludes his Compendium of Seven Categories by showing that all the other *padârthas* mentioned by *Gotama* as well as other writers are included in some one of the seven enumerated at the beginning of this book. *Gotama's* first aphorism which is quoted by T. D.

contains a list of sixteen *padârthas* recognized by the *Naiyâyikas* proper, namely, प्रमाण (Proof), प्रमेय (Object of knowledge), संशय (Doubt), प्रयोजन (Motive), दृष्टान्त (Instance), सिद्धान्त (Conclusion), अवयव (Premise), तर्क (*Reductio ad Absurdum*), निर्णय (Determination), वाद (Disquisition), जल्प (Controversy), वितण्डा (Cavil), हेत्वाभास (Fallacy), छल (Perversion), जाति (Self-contradiction), and निग्रहस्थान (Refutation). T. D. then briefly explains each of these and its subdivisions. All these are not properly speaking categories but only so many topics that require to be attended to in a disputation with an antagonist. *Gotama's* 16 *topics* which are meant for dialectical purposes are therefore in no way irreconcilable with the seven *Categories* of *Kanâda* which are metaphysical. There are however some other things recognized as separate *padârthas* by other systematists, but they also fall under the seven mentioned in this book. For instance शक्ति (*Power*) and स्वत्व (*Ownership*), says T. D., are not independent categories as some have supposed. The *power* of burning which resides in fire is not different from fire, while the *power* of ashes to cleanse metals is also not distinct from the washing away of those ashes, after they have purified the metal. स्वत्व or *ownership* is only the capability of a thing for being disposed of just as one pleases, and is therefore nothing but a quality of the thing. सादृश्य (*Resemblance*) has also been supposed by some to be a distinct *padârtha* ; but *Viśvanâtha* answers : सादृश्यमपि न पदार्थान्तरं किं तु तद्भिन्नत्वे सति तद्गतभूयोधर्मवत्त्वं । यथा चन्द्रभिन्नत्वे सति चन्द्रगताल्हादकत्वादिमत्त्वं मुखे चन्द्रसादृश्यम् । *

What is an injunction.

2. The last paragraph of T. D. begins with a curious disquisition on the meaning of the Potential form, यजेत जुहुयात् etc. which is usually employed in Vedic injunctions ; but it is rather difficult to see how the topic is relevant in a book on *Nyâya*, unless of course it is intended to show that the *Nyâya* system, although differing considerably from the exegetical school of *Mîmâṁsakas*, is not really inconsistent with the unquestioned authority of the *Vedas* and has its own method

* S. M. Calc. ed. p. 4.

of interpreting Vedic texts. विधि, according to *Gotama*, is a विधायकवाक्य, ' a text which enjoins some act upon men. ' * Vedic texts are either विधि (Injunction) अर्थवाद (Statement of a fact) or अनुवाद (Repetition), of which विधि is the principal and the other two only subsidiary to it. *Injunction* is of two kinds, नियोग (Command) such as अग्निहोत्रं जुहुयात् स्वर्गकामः, or अनुज्ञा (Permission) such as ज्योतिष्टोमेन स्वर्गकामो यजेत, the difference between the two being that the first enjoins a नित्यकर्म which entails sin if omitted, while the second prescribes only a काम्यकर्म which may or may not be performed. *Annambhaṭṭa's* definition of विधि is " a sentence which conveys knowledge that prompts a desire for action which in its turn produces effort." The second of the above texts for instance prompts a यजमान to perform a ज्योतिष्टोम, and then he makes preparations for the ceremony. But one might ask how can ज्योतिष्टोम be the cause of the attainment of heaven to the यजमान since a cause must be फलायोगव्यवच्छिन्न, ' immediately preceding the effect,' while in this case the end of the sacrifice and its फल, *viz*. the attainment of heaven (which can take place only after the death of यजमान), may be separated by considerable lapse of time ? To remove this difficulty and establish a connection between the cause ज्योतिष्टोम and the फल स्वर्ग, a व्यापार is assumed in the interval, called अपूर्व.

The summum bonum.

3. Although the *Naiyâyika* accepts the efficacy of *Vedic* rites as befits every orthodox systematist, he does not depend upon them exclusively. The attaimnent of heaven by means of the *Vedic* rites is not according to him the true goal of man. The end and aim of philosophy, says T. D., such as the knowledge of the seven *padârthas*, is Salvation, which consists in recognizing the self as distinct from body and other material things. This is laid down in the celebrated text, "Oh Maitreyi, the Self should be perceived, heard,

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* G. S. II, 1, 62.

considered and contemplated upon."* *Gotama* defines निश्रेयस or अपवर्ग as आत्यन्तिकी दुःखनिवृत्ति 'eternal cessation of pain,' while *Kanâda* declares that मोक्ष or *salvation* consists in 'the separation of the soul from the former body, not followed by his union with another owing to the absence of अदृष्ट.'† According to both, *salvation* consists not in any kind of positive pleasure as the *Mîmâmsakas* think, but in the complete and eternal cessation of all pain. This can be attained by right knowledge alone, as is distinctly said in the *Śruti*, तमेव विदित्वातिमृत्युमेति नान्यः पन्था विद्यतेयनाय.‡ कर्म, *i. e.* the *Vedic* rite, does not directly lead to *salvation* as the *Mîmâmsakas* suppose; but it only prepares the ground for the attainment of knowledge by destroying sins and purifying the soul. When this knowledge is digested by constant contemplation, it ripens and leads to कैवल्य. This process is described in *Gotama's* second aphorism, दुःखजन्मप्रवृत्तिदोषमिथ्याज्ञानानामुत्तरोत्तरापाये तदनन्तरापायादपवर्गः.§ Of the five things, pain, birth, effort, faults and erroneous knowledge, the destruction of the subsequent leads to the destruction of the immediately preceding, and so ultimately the salvation follows. The destruction of मिथ्याज्ञान causes the removal of various दोषs such as राग, द्वेष etc. When these are removed *effort* also ceases, for no desire is left to induce प्रवृत्ति. Cessation of प्रवृत्ति necessarily stops जन्ममरणपरम्परा; for प्रवृत्ति having ceased, no action is done and no अदृष्ट which is the cause of जन्म is produced. When the series of births ends, it is necessarily followed by the cessation of pain, for then the soul is for ever freed from the body which is the seat of pain. Finally, complete cessation of pain brings on salvation, which is the ultimate goal of all true philosophy. The proper way to attain salvation is therefore to attack the very beginning, namely, मिथ्याज्ञान which lies at the root of all our misery. This मिथ्याज्ञान consists in the er-

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* आत्मा वा अरे द्रष्टव्यः श्रोतव्यो मन्तव्यो निदिध्यासितव्यो मैत्रेयि। *Brih. Âr. Up.* IV, 4. 5.

† *Viśvanâtha:* V. S. *Vritti* II, 18.

‡ *Śvetâśvatara. Up.* VI, 15.

§ G. S. I, 1, 2.

roneous identification of the soul with our body and with material objects. Cognitions such as अहं सुखी, अहं दुःखी are all products of such wrong identification. It is the purpose of true *Sâstra* therefore to destroy this मिथ्याज्ञान by imparting सत्यज्ञान. This true knowledge is the correct knowledge of the seven categories, for it is only by knowing these accurately that one can discriminate them from the eternal and transcendental Soul. To give a right knowledge of the *padârthas* is therefore the प्रयोजन of this *Sâstra.* The necessity for inculcating this प्रयोजन arises from our common experience as expressed in the maxim प्रयोजनमनुद्दिश्य न मन्दोऽपि प्रवर्तते which is as true in the case of acquision of knowledge as in other walks of life. All systems of Indian philosophy open with an enunciation of अनुबन्धचतुष्टय the four requisites of every *Sâstra*, and प्रयोजन or purpose which is one of them is invariably stated to be the तत्त्वज्ञान, the knowledge of reality, leading to salvation. Ancient Hindu philosophers may fight with one another on almost every point, but in one respect they agree among themselves and differ from the votaries of other religions, viz. in holding that it is *knowledge of truth* and not blind faith in a revelation or a Saviour that is the road to salvation. Even the religion of *Bhakti* which spread through and permeated popular thought in India in later times under Mahomedan influence was based on the solid principle of तत्त्वज्ञान. The doctrine of ज्ञानान्मोक्षः is in fact the corner-stone of all the philosophical systems of India.

Appendix A.

Meaning of Avachchhedaka.

Nothing is more difficult for a beginner than to understand the exact sense of the term *Avachchhedaka* and its varieties which occur so frequently in *Nyâya* writings. The following Note on the meaning of the word appended to Cowell's translation of *Udayanâchârya's Kusumâñjali* will therefore be found useful:—

" The term *Avachchhedaka* has at least three meanings, as distinguishing, particularizing, and determining.

a. In the phrase 'a blue lotus,' 'blue' is the distinguishing *Avâchchhedaka* (*i. e.* Viśeshaṇa) of the lotus;—it distinguishes it from others of different colours.

b. In the sentence ' the bird sits on the tree on the branch' (वृक्षे शाखायां पक्षी), *śâkhâyâm* particularises the exact spot—this is the *ekadeśâvachchhedaka.*

c. But the third is the usual *Naiyâyika* use of the word *i. e.* as determining (*niyâmaka*). Wherever we find a relation which is not itself included in any one of the seven categories but is common to several, we require something to determine its different varieties; thus if we say that fire is the cause of smoke, or *vice versa* smoke the effect of fire, we do not mean only this particular case but any fire or smoke; we therefore require, to determine this particular relation of causality, something which shall be always found present with it. This in ' fire is the cause of smoke' it will be *vahnitva*, the species of all fires. This will always be found present wherever the causation of smoke is found, and it is therefore called the *dhûma-kâraṇatâvachchhedaka* as *dhûmatwa* would be the *vahnikâryatâvachchedaka.* If we have several causes or effects (as *e. g.* green wood in the case of smoke), each *kâraṇatâ* or *kâryatâ* will require its own *avachchhedaka.* But we could not say that ' substance ' is the *avachchhedaka* of ' quality ' although it does always

accompany it, because quality is a category by itself and common to several. An *avachchhedaka* is always required for such relations as *kâraṇatâ*, *kâryatâ*, *śakyatâ*, *jñeyatâ*, *pratiyogitâ*, etc. Thus *gotva* is the *avachchhedaka* of the *go-śabda-śakyatâ* as otherwise the word *go* might be restricted to mean only this particular cow, or extended to include every animal; and in वह्न्यभावस्य प्रतियोगि वह्निः, we have *vahnitva* as the *avachchhedaka* of the *pratiyogitâ*. This determining notion need not be always a species; thus in कार्यस्य जनकश्चेष्टावान्, *cheshṭâ* is the *avachchhedaka* of *kâraṇatâ*, and *cheshtâ* is included in the category of ' action. ' (Cowell : *Kusumâñjali* of *Udayanâchârya*, p. 26).

Appendix B.

The following lists of all the known commentaries on *Annambhaṭṭa's Tarka-Saṅgraha* and *Tarka-Dîpikâ* are compiled from Aufrchet's *Catalogus Catalogorum*, Bhîmâchârya's *Nyâya-kośa*, Hall's Bibliographical Index of Indian Philosophical Systems and other sources. Letters in brackets indicate the copies consulted for which see Appendix C.

I Commentaries on तर्कसंग्रह.

१ तर्कसंग्रहदीपिका or तर्कदीपिका by the author of T. S. himself, printed at various places.

२ न्यायबोधिनी by गोवर्धनमिश्र, printed by N. S. Press at Bombay.

३ सिद्धान्तचन्द्रोदय by श्रीकृष्णधूर्जटिदीक्षित, printed at Benares.

४ पदकृत्य by चन्द्रजसिंह, printed by N. S. Press at Bombay.

५ तर्कसंग्रहतत्त्वप्रकाश by नीलकण्ठ ; this is perhaps नीलकण्ठी.

६ निरुक्ति or पट्टाभिरामटिप्पणी by पट्टाभिराम or माधवपट्टाभिराम, printed in 1915 at Madras (W.)

७ तर्कसंग्रहवाक्यार्थनिरुक्ति or निरुक्ति printed in 1915 at Madras (W.)

८ तर्कसंग्रहचन्द्रिका by मुकुन्दभट्ट गाडगीळ, printed by N. S. Press at Bombay.

९ तर्कसंग्रहव्याख्या or वाक्यवृत्ति by मेरुशास्त्री गोडबोले, printed in 1915 at Madras (W.)

१० तर्कसंग्रहटीका by अनन्तनारायण.

११ तर्कफक्किका by क्षमाकल्याण.

१२ न्यायार्थलघुबोधिनी by गोवर्धनरङ्गाचार्य.
१३ तर्कसंग्रहटीका by गौरीकान्त.
१४ निरुक्ति by जगन्नाथशास्त्रिन्.
१५ न्यायबोधिनी by शुक्लरत्ननाथ.
१६ त. सं. टीका by रामनाथ.
१७ तर्कसंग्रहतरङ्गिणी by विन्ध्येश्वरीप्रसाद.
१८ त. सं. टीका by विश्वनाथ.
१९ तर्कचन्द्रिका or प्रभा by वैद्यनाथ गाडगीळ.
२० त. सं. टीका by हनुमान् son of व्यास.
२१ त. सं. व्याख्या by मुरारि.
२२ तर्कसंग्रहोपन्यास ; author unknown.
२३ तर्कसंग्रहटीका; author not known.
२४ तर्कसंग्रहशंकु; Ditto.
२५ न्यायचन्द्रिका; Ditto.

II. Commentaries on तर्कदीपिका.

१ तर्कसंग्रहदीपिकाप्रकाश or नीलकण्ठप्रकाशिका by नीलकण्ठशास्त्रिन् author of तत्त्वचिन्तामणिदीधितिटीका. This is again commented on by रामभद्रभट्ट. It is printed at Bombay, Benares and Madras.

२ रामरुद्रीयम् by रामरुद्रभट्ट printed at Madras (W).

३ नृसिंहप्रकाशिका or नृसिंहीय by राय नरसिंह printed at Madras (W).

४ पट्टाभिरामप्रकाशिका ends abruptly at वायु printed at Madras (W).

५ भास्करोदया a commentary on नीलकण्ठी by लक्ष्मीनृसिंह, son of नीलकण्ठ, printed by N. S. Press at Bombay. (R)

६ तर्कफक्किका by क्षमाकल्याण, pupil of जिनलाभसूरि who wrote his commentary on both T. S. and T. D. in 1772 A. D.

७ सुरतकल्पतरु by श्रीनिवास.

८ टीका by गङ्गाधरभट्ट.

९ टीका by जगदीशभट्ट.

१० तत्त्वार्थदीपिका by वाधूलवेङ्कटगुरु.

Appendix C.

The present edition of the *Tarka-Sangraha* and its two commentaries is based on the following copies. Of these fourteen twelve are printed or lithographed editions, and the rest were Mss. Out of these, twelve give the text of *Sangraha*, eleven of the *Dîpikâ* and eight of the *Nyâya-Bodhinî*. In some cases the same copy gives both the original and either of the two commentaries, while the one marked **C** contains all the three. These have been marked as one. The following conspectus will give an idea of the varied character of the editions and Mss. consulted :—

Tarka-Saṅgraha.

A—*Tarka-Saṅgraha* with *Dîpikâ* (3rd ed.), carefully edited by the late Mr. K. P. Parab and printed at the Nirnaya-sagara Press, Bombay.

B—The text of *Saṅgraha* alone, printed in Ballantyne's *Lectures on Nyâya Philosophy* (Allahabad 1849).

C—A lithograph edition of *Saṅgraha*, *Dîpikâ* and *Nyâya-Bodhinî*, with different paging for each and belonging to the Jeypur library. It is very carelessly printed. A portion of the *Sangraha* from the 28th to the 31st section inclusive, as well as the concluding paragraph of the *Dîpikâ* and the portion of *Nyâya–Bodhinî* after शब्दपरिच्छेद are missing. However it generally gives correct readings and proved useful in disputed places. It was obtained from the late Pundit Durga-Prasad of Jeypur.

D—An oblong edition of *Sangraha* with the commentary *Siddhânta–Chadrodaya* by *Śrikrishna Dhûrjaṭi Dikshita* printed at Benares in 1881. It is carefully edited and proved a useful guide, chiefly owing to the commentary which is copious though not always accurate.

E—An oblong edition of *Sangraha* with the commentary *Vâkya-Vritti* of *Meru Śâstri* printed at Poona in 1873. Its value consists entirely in the commentary.

F—An annotated edition of *Sangraha* and *Dîpikâ* by Mr. K. C. Mehendale B. A. This although professing to be based on two or three Mss. does not materially differ from the Nirnaya Sagar edition. A second edition of this has been published in 1908 with the addition of a new Sanskrit commentary by Pandit Bhavânîshankar Shastri.

G—A Ms. containing the *Sangraha* and the *Dîpikâ* obtained from the library of Baroda Sanskrit Pâṭhaśâlâ. It gives important variants in several places, especially in the *Dîpikâ*, which are not to be found in other copies. It closely agrees with **J**, and seems to have been copied either from it or from some common original. It bears no date.

H—Ms. containing *Sangraha* only obtained from Ratnagiri. It was copied at Benares in Saṁvat 1820. It varies pretty often from the usual text, but the readings are not generally happy.

J—A Ms. of *Sangraha* and *Dîpikâ* belonging to Dr. H. Jacobi of Bonn, Germany. It is undoubtedly the oldest and also the best authority. It is very clearly written and contains many marginal corrections in at least two hands. The *Saṅgraha* and the *Dîpikâ* are paged differently and have different colophons. The colophon at the end of the *Dîpikâ* is inserted in our edition (p. 67 *supra*).; while that of the *Sangraha* runs thus:—इति श्रीतर्कसंग्रहाभिधानो ग्रन्थः समाप्तिमगमत्। सांबशिवो जयतु। श्रीरस्तु। संवत् १७७० वर्षे कार्तिकशुक्लषष्ट्यां बुधे लिखितोऽयं ग्रन्थः। शुभमस्तु॥ It arrived after the work of collation of the 1st edition was completed, but just in time to allow its *varietas lectionis* being incorporated in the footnotes. Fortunately except in one or two instances no alterations were needed, as the

readings already selected were found to agree with those in **J**. In several cases many doubtful readings and conjectural emendations of mine were unexpectedly confirmed by this Ms., a fact which is perhaps the best proof of the correctness of the readings adopted. My hearty thanks are due to Dr. Jacobi for lending his copy for use, and also to Mr. B. G. Tilak of Poona who procured it for me.

K—This is an old closely written Ms. containing the *Saṅgraha* and the *Nyâya-Bodhinî*, and obtained from Miraj. It possesses great value and has been mainly relied upon for the text of the *Nyâya-Bodhinî*.

Tarka-Dîpikâ.

Besides **A**, **C**, **F**, **G**, and **J** already described; three printed and two Ms. copies of the *Dîpikâ* were available, namely :—

L—An old and badly written Ms. of *Dîpikâ* obtained from the library of the late Bâlaśâstri Âgâśe of Ratnagiri. It seeme to have been copied at Benares in Saṁvat 1790 by one Vis'vanâtha Joshi, son of Gopal. It is written in several hands and is often incorrect.

M—A fine and very carefully written Ms. of *Dîpikâ* obtained from Barhanpur. It often differed from other copies, and although its variants had sometimes to be rejected it was useful for comparison.

N—An oblong edition of *Dîpikâ* with the well-known commentary of *Nîlakaṇṭha*, printed at Benares in 1875. It contains several additions which were not found in any other copy and which had therefore to be rejected. *Nîlakaṇṭha's* commentary however proved a valuable aid in judging the correctness of a reading, in as much as it generally gives the best reading and sometimes notices other variants.

P:—An oblong edtion of *Dîpikâ* only, printed at Jagadîs'-vara Press, Bombay. It generally agrees with **A** and was not of much use.

Q:—An edition of *Sangraha*, *Nîlakantha's Prakâsa* and a commentary thereon named *Bhâskarodayâ* by Nilakantha's son *Lakshmî-nṛisinha*, edited by Pandit Mukunda Jha and printed by Nirnayasagar Press, Bombay.

Nyâya-Bodhinî.

Besides **C** and **K** already described, four printed and two Ms. copies of *Nyâya-Bodhinî* were consulted, viz:—

R:—A Ms. of *Nyâya-Bodhinî* only, written carelessly and often incorrectly. It was kindly lent by the late Mr. N. B. Godbole, B. A. of the Poona Training College. It was copied on the 13th of Âshâḍha, Vadya, *Samvat* 1907, and generally agreed with **C**.

S:—A lithograph edition of *Nyâya-Bodhinî* printed at Benaras in 1875. The editor seems to have made no attempt at collation. It contains many sentences and even long passages extending to a page or more which are not found in any of the other Mss. consulted by me. These additions appear to be interpolations, consisting of explanatory paraphrases of the original short sentences, which are sometimes retained and sometimes omitted.

T:—This appears to be a reprint, and a very incorrect one too, of the last preceding, printed at Benares in 1881.

U:—An editon of *Sangraha* and *Nyâya-Bodhinî* with annotations called *Padakṛitya* printed by Nirnaya-Sagar Press, Bombay.

V:—A Ms. of *Nyâya-Bodhinî* kindly lent by Pandit Badrinâtha Śâstrin of Baroda. It generally agrees with **B**, **R** and **C**, and was useful for ascertaining the correct reading whenever the other copies differed hopelessly. It sometimes gives its own variants. It ends at सामान्य and bears no date.

W:—An edition of *Saṅgraha* and nine Commentaries edited and published by Pandit Chandraśekhara Śastrigal of Mylapore, published in 1915 at Madras.

X, **Y** and **Z**:—These three Mss. were kindly lent to me by Pandit Bâlâchârya Gajendragadkar of Satara to whom I am highly obliged for the loan. One of these X containing the *Saṅgraha* bears the date Śakê 1720. The other two **Y** and **Z** contain the text of the *Dîpikâ*. They mostly agree with **G** and **J** and are chiefly valuable for having been corrected under the superintendence of the late learned Anantâchârya Gajendragadkar.

Most of the **Mss.** and editions of *Saṅgraha* and *Dîpikâ* mentioned above belong to Northern India or the Deccan. As *Annambhaṭṭa* was a resident of Carnatic, Mss. from that quarter would have proved very valuable guides, but **W**. which is an elaborate edition of *Sangraha* and Commentaries by a learned Pandit of South India has largely supplied the desideratum. The copies already consulted belong to different ages and distant provinces, and hence the text of *Annambhaṭṭa's* two works may for all practical purposes be taken as settled. It is to be regretted that the same cannot be said of the *Nyâya-Bodhini*. Only a few copies of this work were available, and they varied among themselves so much and some times so hopelessly, that it was often impossible to ascertain the correct reading. Sentences and even whole passages are read differently in different Mss. and the work of collation was most difficult in several places. The defects can be cured only when more trustworthy Mss. are available.

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